

THE NATIONAL BANK OF SCOTLAND LIMITED

has served the agricultural industry for over a hundred and twenty-five years and is proud to include among its customers a large number of Farmers, Seed and Grain Merchants, and Implement Manufacturers.



HEAD OFFICE:

42 ST ANDREW SQUARE, EDINBURGH

Through its network of Branches, extending over
the length and breadth of Scotland,

**The Bank is able to place at the disposal of
Agriculturists in all areas**

A COMPLETE AND MODERN BANKING SERVICE

GENERAL MANAGER

J. ALLAN BROWN

**INDIAN AGRICULTURAL
RESEARCH INSTITUTE, NEW DELHI.**



DINWIDDIE'S

**WELL
KNOWN
WIDELY
USED**

**FARM RECORD
PUBLICATIONS**

are prepared in close collaboration with practical farmers and agriculturists.

New forms frequently added for special purposes.

Forms readily designed for individual needs.

Farm Accounts, Cultivation Records, Cattle and Milk Records, Service Records, Pedigree Forms, Lactation Charts (for comparison of yields), Stock Record Notebook, Farm Machinery Register, Etc., Etc.

Send for latest List of Publications.

All books and forms forwarded "on approval," even if already paid for.

ROBERT DINWIDDIE & CO., LIMITED

*FARM RECORD CONSULTANTS
PRINTERS, PUBLISHERS & BOOKSELLERS*

DUMFRIES, SCOTLAND

Estab. 1846

Tel. Nos. 1352/53



OVER 250 YEARS OF BANKING SERVICE
SCOTLAND'S OLDEST BANK

(Constituted by Act of Parliament 1695)

TOTAL ASSETS
EXCEED £110 MILLIONS

Governor :

The Right Hon. LORD ELPHINSTONE, K.T.

Deputy Governor : JAMES GOURLAY, B.Sc.

J. B. CRAWFORD, *Treasurer*

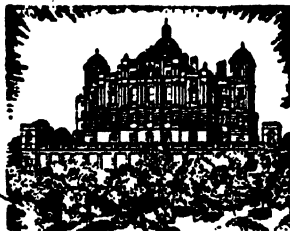
EVERY DESCRIPTION OF BRITISH AND
FOREIGN BANKING BUSINESS
TRANSACTED

OVER 200 BRANCHES

LONDON OFFICES :

City Office : 30 BISHOPSGATE, E.C.2

Piccadilly Circus Branch : 16-18 PICCADILLY, W.1



BANK OF SCOTLAND

THE MOUND
EDINBURGH

WORKS ON AGRICULTURE, &c.

JOURNAL OF AGRICULTURE, AND TRANSACTIONS OF THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND.

Second Series, 1828 to 1843, 21 vols.—*out of print.*

Third Series, 1843 to 1865, 22 vols.—*out of print.*

INDEX TO THE FIRST, SECOND, AND THIRD SERIES OF THE TRANSACTIONS OF THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND FROM 1799 TO 1865. Cloth, 5s.

TRANSACTIONS OF THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND. Fourth Series, 1866-71, 6 numbers, sewed, 4s. each; 1872-88, 17 volumes, cloth, 5s. each.

INDEX TO THE FOURTH SERIES OF THE SOCIETY'S TRANS- ACTIONS FROM 1866 TO 1888, bound in cloth, 3s.

TRANSACTIONS OF THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND. Fifth Series, 1889-1918, 60 volumes, bound in cloth, 5s. each. Vols. for 1899 to 1901, 1905, and 1924 *out of print.*

INDEX TO THE FIFTH SERIES OF THE SOCIETY'S TRANS- ACTIONS.

From 1889 to 1895, paper cover, 1s. } *out of print.*

From 1896 to 1902, paper cover, 1s.

From 1903 to 1909, paper cover, 1s.

From 1910 to 1916, paper cover, 1s.

From 1917 to 1923, paper cover, 1s.

From 1924 to 1930, paper cover, 1s.

From 1931 to 1937, paper cover, 1s.

From 1938 to 1945, paper cover, 1s.

REPORT ON THE PRESENT STATE OF THE AGRICULTURE OF SCOTLAND, ARRANGED UNDER THE AUSPICES OF THE HIGHLAND AND AGRICULTURAL SOCIETY. Presented at the International Agricultural Congress at Paris in June 1878. Cloth, 5s. *Free to Members on application to the Secretary.*

DICTIONARIUM SCOTO-CELTICUM: A DICTIONARY OF THE GAELIC LANGUAGE, in two volumes. Compiled and published under the direc- tion of the Highland Society of Scotland, 1828. Bound in cloth, £7, 7s.; 6 copies on extra paper, £10, 10s.

PRACTICAL REMARKS ON AGRICULTURAL DRAINAGE. By WILLIAM W. HOZIER of Tannochside. Prize Report, published under the auspices of the Society, 1870. Cloth, 1s.

HUMANITY TO ANIMALS, BEING EXTRACTS FROM PRIZE ESSAYS ON THE MOST EFFECTUAL METHOD OF INDOCTRINATING THAT DUTY IN ELEMENTARY SCHOOLS. Published under the auspices of the Society. Sewed, 3d.

HISTORY OF THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND, WITH NOTICES OF ANTERIOR SOCIETIES FOR THE PROMOTION OF AGRICULTURE IN SCOTLAND. By ALEXANDER RAMSAY, LL.D. Demy 8vo, cloth, 16s.

THE PINE BEETLE (HYLESINUS PINIPERDA L.). By W. SOMERVILLE, D.Cc., B.Sc. Prize Report. Sewed, 3d.

*The above Works can be had on application to WILLIAM BLACKWOOD & SONS LTD.,
45 George Street, Edinburgh, and 1 Bateman's Buildings, Soho Square, London, W.1*

TRANSACTIONS
OF
THE ROYAL
HIGHLAND AND AGRICULTURAL SOCIETY
OF SCOTLAND

WITH
AN ABSTRACT OF THE PROCEEDINGS AT BOARD AND GENERAL
MEETINGS, AND THE PREMIUMS OFFERED BY
THE SOCIETY IN 1949

PUBLISHED ANNUALLY



FIFTH SERIES
VOL. LXI.

EDITED BY R. M. LEMMON, SECRETARY TO THE SOCIETY

EDINBURGH:
WILLIAM BLACKWOOD & SONS LTD., 45 GEORGE STREET
AND 1. BATEMAN'S BUILDINGS, SOHO SQUARE, LONDON, W.1

1949

CONTENTS

	PAGE
1. TAXATION—FARMS AND ESTATES. By ROBERT P. BURNET, C.A.	1
2. THE COMPOSITION AND FEEDING VALUE OF GRASS AND CLOVER. By PROFESSOR S. J. WATSON, D.Sc., F.R.I.C., F.R.S.E.	16
3. OBSERVATIONS ON THE PERFORMANCE OF SHEEP BREEDS OTHER THAN THE SCOTTISH BLACKFACE ON AN ARGYLL-SHIRE HILL FARM. By W. M. BROWNLIE, B.Sc., M.R.C.V.S., D.V.S.M. (<i>Illustrated</i>)	32
4. THE TITHE OF PLANT DISEASE. By JOHN GRAINGER (<i>Illustrated</i>)	56
5. AGRICULTURAL RESEARCH IN SCOTLAND IN 1948. BEING A BRIEF SUMMARY OF THE WORK AT THE SCOTTISH AGRICULTURAL RESEARCH STATIONS AND AGRICULTURAL AND VETERINARY COLLEGES DURING THE YEAR—	
Institute of Animal Genetics	77
Animal Diseases Research Association	81
The Rowett Research Institute	82
Scottish Plant-Breeding Station	85
The Hannah Dairy Research Institute	88
The Macaulay Institute for Soil Research	91
The Edinburgh and East of Scotland College of Agriculture	96
The North of Scotland College of Agriculture	101
The West of Scotland Agricultural College	107
Royal (Dick) Veterinary College	111

6. MILK RECORDS. By JAMES A. PATERSON	112
7. THE CEREAL AND OTHER CROPS OF SCOTLAND FOR 1948 .	126
8. THE WEATHER OF SCOTLAND IN 1948. By R. A. WATSON, B.A.	148
Rainfall (Measured in Inches) for 1948	155
9. AGRICULTURAL STATISTICS	156
10. PRICES OF GRAIN IN EDINBURGH CORN MARKET FOR 1948.	163
11. PRICES OF SHEEP SINCE 1818	164
12. PRICES OF WOOL SINCE 1818	168
13. GENERAL SHOW AT INVERNESS, 1948 (<i>Illustrated</i>) . .	171
14. PREMIUMS AWARDED BY THE SOCIETY IN 1948 . . .	193
15. ACCOUNTS OF THE SOCIETY FOR 1948	282
16. PROCEEDINGS AT BOARD AND GENERAL MEETINGS . .	291

APPENDIX I.

PREMIUMS OFFERED BY THE SOCIETY IN 1949	1
---	---

APPENDIX II.

REGULATIONS AND PRIZE LIST FOR DUNDEE SHOW, 1949 .	1
--	---

INDEX	<i>At end</i>
-----------------	---------------

"It is to be distinctly understood that the Society is not responsible for the views, statements, or opinions of any of the Writers whose Papers are published in the 'Transactions.'"

R. M. LEMMON,
Secretary.

8 EGLINTON CRESCENT,
EDINBURGH 12.

ILLUSTRATIONS

FIG.	PAGE	FIG.	PAGE
1. Shows the growth of the lambs	52	15. Highland Bull, "Uallach of Achnaoloch" 4475	183
2. Forecasting Potato Blight; • data from Auchincruive, 1944	57	16. Ayrshire Cow, "Balig Queen" 47,623	183
3. A satisfactory crop of oats raised from a failing braird by timely application of ground limestone	61	17. British Friesian Cow, "Craigie-mains Victoria 29th" 377,568 R.M.P.	184
4. The results of a large-scale survey of nutritional disorders of the oat, summer 1948	62	18. Jersey Bull, "Snailwell Aristocrat 4th" 24,750	184
5. Tulip-root of oats	64	19. Clydesdale Stallion, "Gartness Utility" 24,280	185
6. Development of the bean plant compared with the development of Chocolate Spot	68	20. Clydesdale Gelding, "Clyde"	185
7. Average percentage relative humidity in the British Isles, 1938-44	70	21. Clydesdale Filly, "Cowden Primula"	186
8. Average number of rain days per annum in the British Isles, 1938-44	71	22. Hunter Gelding, "Darrington"	186
9. Typical relations between the amount of Chocolate Spot of beans and the number of hours 100 per cent relative humidity per week	72	23. Highland Pony Stallion, "Glenalmond" 2395	187
10. Growth of field beans under normal length of day and with only 8 hours of light daily	75	24. Shetland Pony Stallion, "Harviestoun Beachdair"	187
11. Shorthorn Cow, "Morphie Princess Royal" 244,901	181	25. Blackface Tup	188
12. Aberdeen-Angus Cow, "Euthalla 2nd of Douneside" 131,342	181	26. Cheviot Tup, "Lucky Lad"	188
13. Galloway Heifer, "Troquhain of Nether Rusko" 45,040	182	27. North Country Cheviot Tup, "Mighty Fine"	189
14. Belted Galloway Bull, "Cloburn Smuts" 1541 B	182	28. Border Leicester Tup, "King o' Carriok" 14,084	189
		29. Half-Bred Ewe	190
		30. Oxford Down Tup Lamb	190
		31. Suffolk Tup, "Benaore Umpire" 28,956	191
		32. Saanen Male Goat, "Kildale Ossian" 8 987	191
		33. Large White Sow, "Moncur Champion Lady 17th"	192
		34. Large Black Boar, "Thelveton Malcolm 1st" BA 59	192

TRANSACTIONS

OF

THE ROYAL HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND

TAXATION—FARMS AND ESTATES.

By ROBERT P. BURNET, C.A.,
Glasgow.

The Keeping of Accounts.—In the case of *Calder v. Allanson* (1935) it was said in the course of the judgment :—

“ Before that, that is January 1929, no business books had been kept. I agree that little inference can be drawn against a farmer by reason of the fact that he does not keep business books, as it is notorious that so many of them do not, and it is probably an unfortunate thing that they do not.”

The day when this can be said has come to an end with the bringing within the profits basis of the liability to Income Tax for 1949-50 onwards of all occupiers of land, except woodlands, managed on a commercial basis with a view to profits. This has been a gradual process. The profits from the occupation of land, except market garden land and land occupied by cattle and milk dealers where the land was insufficient for the keep of the cattle brought on to the land, were not until 1941-42 assessed on the basis of profits arising from that source but were measured according to the rental value of the land. It was not, therefore, necessary for farmers to keep accounts for the purpose of Income Tax. Larger farms which came within liability to the National Defence Contribution introduced in 1937 were, however, required to keep accounts from that date as the liability in that case was computed on the basis of profits and not on the conventional rental value basis. Similarly, from 1939, accounts were required for Excess Profits Tax purposes in the case of those farms with profits above the exemption limit. In fact, those within Excess Profits Tax liability found themselves in a difficult position if they had not kept accounts for earlier years on account of that tax being assessed on the excess of profits over those in a standard period, which period might include any of the years

1935, 1936 or 1937. National Defence Contribution is still in force in an amended form and under a new name—the Profits Tax—from 1st January 1947, but it does not now extend to businesses carried on by individuals or partnerships. Only farms carried on by companies are now, therefore, affected by this tax.

Assessment of Profits.—The actual amount of the assessment of profits from the occupation of land, although based on the rental value of the land, has varied from time to time. In the case of land occupied for “husbandry” it has varied from the actual rental value to three times the rental value, the latter coming into force in 1942-43. In the case of land occupied for a purpose other than “husbandry” (excluding market garden land and land occupied by cattle and milk dealers) the assessment was on one-third of the rental value for many years.

“Husbandry.”—The meaning of “husbandry” has been the subject of consideration by the Courts in a large number of cases. Broadly, it means “farming,” but by judicial interpretation it turns rather on the way in which the land is cultivated than on the nature of the crop grown. Land cultivated on the intensive system has been held not to be occupied for the purpose of “husbandry” and liability has arisen on the actual profits, each case depending on its own particular facts. This resulted in some poultry farms being taxed only on a rental value basis and others on a profits basis, depending on the method of production adopted. It even resulted in the anomalous position of the carrying on of a silver fox farm being taxed on only one-third of the rental value of the land occupied.

As already mentioned the process of bringing “husbandry” within the profits basis of assessment commenced in 1941-42. For 1941-42 land occupied for “husbandry” was assessed on a profits basis, except where it was occupied by an individual or a partnership and the rental value did not exceed £300. For this purpose the land of an individual together with the share of any land occupied in partnership and any market garden land required to be aggregated and in the case of a partnership, if any of the individual partners themselves were occupiers of land assessable on a profits basis, the partnership as a whole was assessable on that basis.

For 1942-43 the limit of £300 was reduced to £100 and, as mentioned earlier, for 1949-50 the rental basis is withdrawn completely. This applies not only to land occupied for “husbandry” but to all land managed on a commercial basis with a view to profit, except woodlands. The rental basis of assessment for 1949-50 onwards now, therefore, only applies to land occupied as woodlands and to amenity lands, and where this basis applies the assessment in every case is to be on one-third of the rental value.

PROFITS BASIS OF ASSESSMENT.

The normal basis for measuring the profits for assessment is not the actual profits of the year of assessment but the profits of the accounting period ending within the preceding fiscal year. It is, of

course, open to the taxpayer to make up accounts to any date he chooses, provided the accounts are prepared for regular periods of twelve months.

In the case of "new owners of a business," the first few years of assessment cannot, of course, be on this basis and special provisions apply. (The phrase "new owners of a business" is used to include the occupation of land held on a commercial basis with a view to profit by a new occupier.) For the first fiscal year of a new owner of a business the assessment is on the profits for the period from the commencement of the business until the 5th April following. These may require to be arrived at by dividing the financial accounts of the first period of business on a time basis. The assessment for the second fiscal year is based on the profits of the first twelve months' trading and the assessment for the third fiscal year is based on either the twelve months' accounting period ending in the preceding fiscal year or, if there is no such accounting period, the profits of the first twelve months' trading are normally again taken as the basis. Thereafter, the basis of assessment is on the normal basis of the accounting period ending in the preceding fiscal year.

In the second and third years of assessment on the new owner of a business the taxpayer has the right to claim that the basis of assessment be revised to the profits of the actual fiscal years arrived at by splitting the financial accounts on a time basis if necessary. He may not, however, make the claim for one or other of those years—it must be both or not at all—and the last date for making the claim is the end of the fourth fiscal year.

Where for 1949-50 a business becomes compulsorily assessable on the profits basis for the first time, it is not to be treated as a new business. That is, the assessment is to be based on the profits of the accounting period ending in 1948-49. It was, however, realised that in spite of the fact that the new provisions were announced by the Chancellor in his Budget Speech in April 1948 there would be some cases where financial accounts for a period of twelve months to a date in 1948-49 would not be available. Provision is, therefore, made in those cases which become assessable on a profits basis for the first time in 1949-50 for the taxpayer to elect to have the assessment based on the actual profits of that year instead of the preceding year's profits. This option applies even although the amount of profits is available for the preceding year. The claim in this connection is to be made before 5th April 1951.

Where the assessment was on a rental basis, relief for losses could be obtained which resulted in a cancellation of the rental assessment and a set-off of the loss against other income for the year of the loss, if any, but any unused balance of loss was not available for carry forward and set-off against future profits. Where the business becomes compulsorily assessable on a profits basis for the first time in 1949-50, provision is made for obtaining relief for losses in earlier years even although the assessment was on a rental basis in certain of these years. The relief is, however, to be computed as if the assessment had been made on a profits basis for all years affected prior to 1949-50.

STOCK VALUATIONS.

The normal basis for the valuation of stock-in-trade is cost or market value, whichever is the lower. Whether or not an asset comes within the phrase "stock-in-trade" depends on the nature of the business and the purpose for which it is held. An asset which is bought and retained for what it will produce is not "stock-in-trade" but in the nature of a fixed asset. A farm tractor, for example, in the hands of a farmer would be in the nature of a fixed asset, while in the hands of a motor manufacturer or dealer it would be "stock-in-trade." A fixed asset of this nature is valued for Income Tax purposes each year at cost, subject to allowances for depreciation, while, as already stated, stock-in-trade is normally valued at cost or market value, whichever is the lower. Livestock may fall into either class, depending on the nature of the farm, although this fact was not recognised by the Inland Revenue until recent years. This resulted in a cost or market value basis being applied in all cases to the valuation of livestock instead of a fixed cost basis which would have been more appropriate to dairy herds, ewe flocks, &c., which were in fact in many cases more akin to a fixed asset than to stock-in-trade.

In 1941-42 an arrangement was made with the Board of Inland Revenue under which dairy herds, ewe flocks, &c., which were maintained for the purpose of producing a saleable article, could be treated on a fixed or capital asset basis and the substance of the arrangement was given statutory effect for 1947-48 onwards. This basis, known as the "herd basis," is optional to the taxpayer. If not adopted, the livestock falls to be valued on the normal basis of cost or market value, whichever is the lower. Cost, in this case, may be estimated. In the case of a mature animal which was purchased it will, of course, be the actual price paid. In the case of a home-bred animal it will be the cost of rearing to maturity, and in the case of an animal purchased before maturity it will be the cost price plus the cost of rearing to maturity. As an alternative the Inland Revenue will accept 75 per cent of the current market price in the case of valuations on or after 30th September 1947. Prior to that date the percentage applicable was 85 per cent.

Herd Basis.—The herd basis may be claimed by persons carrying on farming involving the keeping of animals or other living creatures in herds, flocks, &c., solely or mainly for the sale of their produce, such as milk, eggs, wool or progeny, &c., but not meat or other parts only saleable on slaughter of the creatures concerned.

If the herd basis is adopted, the initial cost of the herd is not allowed as a charge against profits. Increases in the herd are treated as Capital, but replacements in the herd may be charged against the profits subject to the appropriate disallowances in the case of animals of better quality than the original ones; the proceeds from the animal which was sold, died or ceased to form part of the herd is to be included as a trading receipt. Where the animal was compulsorily slaughtered and is replaced by an animal of poorer quality

the amount to be included as a trading receipt need not exceed the amount allowed as an expense.

The profit or loss on animals sold from the herd and not replaced is to be included in or deducted from the taxable profits. This profit or loss is arrived at by comparing the proceeds of sale with either the cost of breeding to maturity or the cost of acquisition together with the cost of breeding to maturity. It should be made clear that the value of the animal in the herd may be, not the cost of that animal, but if it, itself, is a replacement, the cost of the animal originally in the herd. If, therefore, the animal not replaced is not itself the original animal in the herd and, although of the same quality as the original animal, the cost of it is greater than the original animal, the difference will not bear tax. For example, animal A. is the original animal in the herd and is valued on the herd basis at £50. Animal A. is in due course replaced by animal B. at a cost of £70. Animal B. is of the same quality as animal A., the difference in price being accounted for by an increase in prices generally. It will, therefore, be entered in the herd at the price of animal A. In due course animal B. is sold for £100 and not replaced. The taxable profit will amount to £30 (£100—£70) not £50 (£100—£50) and the balance of profit amounting to £20 will not be liable to tax.

Where the whole or a substantial part of the herd is sold, and not replaced within a period of five years, any profit on the sale is not taxable and any loss on the sale is treated as a capital loss. Special provisions apply where the herd is replaced or begun to be replaced within five years, which result in the profit on sale, if any, becoming taxable and the loss on sale, if any, being allowed as a charge against profits.

The herd basis may not be applied to (1) creatures kept wholly or mainly for public exhibition, racing, &c., (2) animals kept wholly or mainly for work done in connection with the carrying on of the farm, *e.g.*, sheep dogs or work horses, and (3) immature animals, unless the animal cannot be replaced except by animals bred and reared on that land; the immature animals must be bred in the herd, maintained therein for the purpose of replacement, necessarily maintained for that purpose and not more immature animals may be treated as forming part of a herd than are required to prevent a fall in the numbers of the herd. These provisions allow immature animals to be included in the case of hill sheep flocks.

Female animals are treated as becoming mature when they produce their first young. The herd basis may also be claimed in respect of laying birds which become mature when they first lay.

Election to the herd basis must be made in writing to the Inspector of Taxes and once made is irrevocable so far as that particular taxpayer is concerned. The transfer of the business to a company would of course break the continuity for this purpose, but provision is made for dealing with this point. Where a transfer takes place not "at arm's length" and appears to have as its main object the obtaining of the right to make an election to the herd basis or the

right to have that basis cease, the transfer is to take place as if the animals had been sold in the open market.

The election must cover all the animals in the herd of the same species, irrespective of breed, which are kept wholly or mainly for the sake of the products which they produce as living animals.

Where a herd was kept during 1946-47 in connection with a trade assessable on a profits basis or in respect of which relief has been given for that year on the grounds that the profits were less than the assessment on the rental basis, the election required to be made not later than 5th April 1948 and applied for 1947-48. In other cases the election is to be made within twelve months of the end of the first year of assessment in which a production herd of the class affected is kept and the profits become so chargeable.

Where a change from the cost or market value basis of valuation of the livestock to the herd basis is being made, the herd basis of valuation should be applied not only to the valuation of the stock at the end of the accounting period involved but also at the beginning of that period. That is, the basis of valuation for the first accounting period forming the basis of assessment for the first year for which the herd basis is to be applicable should be the same both at the beginning of the year and at the end of the year.

Farmers have found great difficulty in deciding whether or not the herd basis of valuation is likely to be of advantage to them. The answer appears to depend largely on the trend of future market prices. If an early sale of the whole herd is likely, then the price obtained at present market values will probably exceed the value of the herd on the herd basis and in that case the profit resulting will escape tax. In the meantime, tax is not being paid on paper profits represented by the increases in market prices. Finally, in those cases which have been on the fixed cost basis since 1941-42, the revaluation to cost at the commencement of the period for which the herd basis is to apply will result in most cases in increased valuations and the difference will escape tax. On the other hand, if the herd basis has been selected and market values have fallen by the time a sale of the herd takes place, the loss resulting will be a capital loss and no relief obtained for Income Tax purposes.

The valuations of tillages, unexhausted manures and growing crops frequently create difficulties for the farmer, and with a view to assisting in this matter the Inland Revenue have agreed to dispense with a detailed valuation where the normal value of these items does not exceed £700 and a certificate is given that the value at the beginning of the year did not materially differ from that at the end of the year. Even where the normal value exceeds £700 a certificate may be accepted after suitable inquiry. This arrangement does not of course prevent a farmer from introducing the correct valuations into his accounts where these are available.

ALLOWANCES FOR CAPITAL EXPENDITURE.

As mentioned above, fixed assets are taken for Income Tax purposes at cost. Taxpayers, generally, are however entitled to

certain allowances in respect of capital expenditure on machinery or plant, and these also apply to farmers assessable on a profits basis. There are also special allowances for expenditure on agricultural buildings.

Machinery or Plant.—Where the liability to Income Tax falls to be computed on a profits basis an Annual Allowance for Wear and Tear of machinery or plant may be claimed. An Initial Allowance is also granted on the cost of machinery or plant (whether new or secondhand) purchased after 6th April 1946, and if the machinery or plant is still owned and used on that date by the person who incurred the expenditure it may be claimed in respect of purchases between 6th April 1944 and 5th April 1946.

The actual basis of computation of the Annual Allowance is in the jurisdiction of the General Commissioners. The Acts prescribe no figures but define the allowance as "such a deduction as the Commissioners . . . may consider just and reasonable." In practice, however, it is with one exception, with which we are not concerned in these notes, computed as a percentage of the reducing cost, the percentage varying according to the nature of the machinery.¹

The Initial Allowance is one-fifth² of the cost as reduced in the case of machinery purchased prior to 6th April 1946 by the Annual Allowances granted up to that date.

The term "machinery or plant" includes machinery, boilers, engines, shafting, fixtures and fittings of a permanent character, motor vehicles and generally all assets which may be brought within the ordinary meaning of the term. Implements, utensils, loose tools and office furniture are not considered to come within the category of machinery or plant and allowances are made for these by allowing the sums actually expended by way of replacement as a deduction from the profits.

Sometimes an annual stocktaking of loose tools is made and this basis is acceptable to the Inland Revenue.

As an alternative to the Initial and Annual Allowances, the taxpayer will be allowed to charge as an ordinary business expense the actual cost of renewing the machinery or plant. Although the cost of renewals cannot be charged where the Initial and Annual Allowances have been claimed, the cost of renewal is not considered to cover the cost of renewing small parts of machinery so long as the replacements are not of such a nature or so extensive as to destroy or substantially alter the identity of the plant. The cost of ordinary repairs and upkeep is of course admitted as an ordinary business expense whichever basis is adopted. Usually it is found convenient to claim the Initial and Annual Allowances in respect of machinery of a substantial nature and the cost of renewals in the case of smaller items.

¹ These notes were written in February 1949, since when the Finance Act, 1949, has made the practice statutory and permits the alternative of basing the allowances on cost instead of reducing cost. The percentages to be applied in both cases are now in the hands of the Commissioners of Inland Revenue instead of the General Commissioners.

² Two-fifths for machinery purchased on or after 6th April 1949.

The aggregate amount of the deductions to be made in respect of the Initial and Annual Allowances must not exceed the actual cost to the claimant of the machinery or plant on which the allowance is claimed after deducting any sum realised in respect of it. Where, therefore, any machinery or plant in respect of which Initial or Annual Allowances have been given is sold, destroyed or put out of use as being worn out, obsolete, useless, or is no longer required, an adjustment in the allowances may be required. Where the written-down value (*i.e.*, the cost less the allowances) exceeds the amount received on sale, a further allowance is given known as a "Balancing Allowance," and where the written-down value is less than the amount received on sale a charge will be made known as a "Balancing Charge." In the case of a Balancing Charge, however, the amount is restricted to the sum of the allowances made to the claimant. That is, it involves the whole or partial withdrawal of allowances previously made, but does not extend to tax the excess, if any, of the sum realised over the original cost.

An option is given to the taxpayer where there would have been a Balancing Charge and the asset sold is replaced, whereby the amount of the Balancing Charge which would have been made may be set off against the cost of the new machinery. Subsequent allowances on the new machinery are then given on the cost of that machinery less the amount set off. The effect is, therefore, to spread the amount of the Balancing Charge which would have been made over the life of the new machinery, and will be beneficial, apart from the liability not having to be met in one year, in the event of (1) a fall in the rate of tax, and (2) in the case of individuals and partnerships, a falling off in the profits resulting in liability at less than the standard rate.

Where a farmer was assessed on the conventional rental basis in any year the Initial and Annual Allowances were not available to him for that year. On becoming assessable on the profits basis the Annual Allowances will be calculated on the cost of the asset reduced by the Annual Allowances which he would have received if the liability had been on the profits basis throughout. It is to be noted that although these notional Annual Allowances are to be taken into account, any notional Initial Allowances are ignored. This position also applies in calculating the written-down value for the purposes of a Balancing Allowance or a Balancing Charge.

Agricultural Buildings Allowance.—Where the owner or tenant of agricultural property, or woodlands where the assessment is on a profits basis, incurs capital expenditure on the construction of farm houses, farm, agricultural or forestry buildings, cottages, fences, &c., an allowance of one-tenth of the expenditure is given for ten years. This allowance applies to expenditure incurred on or after 6th April 1946, but expenditure between 6th April 1944 and 5th April 1946 is treated as if it had been incurred on the latter date.

The expenditure must not include any expenditure which can be included in a Maintenance Claim, which is dealt with later, and where the expenditure is on a farm house only one-third of the

expenditure is allowed, or if the accommodation and amenities are out of due relation to the nature and extent of the farm the amount allowable may be restricted to a proportion smaller than one-third.

The allowance will normally be given against the farming or forestry assessments, but, if these are insufficient, relief may be obtained by a set-off against any other income of the same year or carried forward indefinitely for set-off against any subsequent farming or forestry profits.

Although the position will not arise for 1949-50, it is interesting to note that the Agricultural Buildings Allowance may be claimed in respect of farm but not forestry buildings, &c., even although the assessment is on a rental basis, and this is to be compared with the position of the Initial and Annual Allowances in respect of machinery or plant. In the latter case these were not granted for any year of assessment in which the rental basis applied.

No question of Balancing Allowances or Charges arises in connection with the Agricultural Buildings Allowance similar to the Balancing Allowances and Charges in respect of machinery or plant.

Where there is a sale or transfer of the interest in land the question of an apportionment of the allowances arises. Where the expenditure was incurred by the landowner, the allowance in the year of transfer is apportioned between the transferor and transferee. Subsequent allowances then belong to the transferee. Where the expenditure was incurred by a tenant and the ingoing tenant makes payment to the outgoing tenant for assets which include assets qualifying for the allowance, the position is the same as for the landowner. In other cases, in the year of transfer the allowance is apportioned between the transferor and the landowner and in subsequent years falls to the landowner.

COMPUTATION OF PROFITS.

The profits brought out by the financial accounts of a business are rarely the same as the profits to be assessed to Income Tax, since expenditure which may properly be considered by the trader to be of a revenue nature may not be a proper deduction for Income Tax purposes and income credited in the accounts may not be of a taxable nature or may be taxable under a different heading. The Acts do not define the expression "profits or gains." They do, however, inferentially enumerate certain deductions and allowances which are to be made in arriving at the amount of the profits, but more particularly they enumerate certain deductions or expenses which are inadmissible.

The taxpayer is frequently puzzled by the distinction between capital expenditure and revenue expenditure, and this is not to be wondered at since it has been the subject of consideration by the Courts in so many taxation cases. The dicta of the Lord Chancellor in *British Insulated & Helsby Cables, Ltd. v. Atherton* (1925) has been frequently quoted in subsequent cases and is of assistance in

considering capital and revenue expenditure. The Lord Chancellor said :—

“ When an expenditure is made not only once and for all but with a view to bringing into existence an asset or an advantage for the enduring benefit of the trade, there is every good reason (in the absence of special circumstances leading to the opposite conclusion) for treating such an expenditure as properly attributable not to revenue but to capital.”

It is not proposed to go into all the adjustments which may be necessary in the financial accounts of a business in order to arrive at the taxable profits, but a few of the adjustments which have special application to farm accounts may be mentioned.

Goods for Own Use.—In most cases the farmer and his family obtain supplies from the farm. An adjustment for the value of these supplies requires, therefore, to be made. It is an old axiom in Income Tax law that a man cannot make a profit out of himself, and it should be remembered, therefore, that in making this adjustment the goods should be valued at cost prices and not selling prices.

Board of Employees.—Where employees receive meals at the farm, in so far as these consist of produce from the farm, the profit has been automatically reduced by the value of the produce consumed. This benefit which employees receive, while not taxable in the hands of the employee, is a proper charge against the profits of the farm. In addition to the consumption by employees of home-produced food, the employee will also no doubt consume goods which have been purchased. An allowance for this will require to be made. Generally, the rate allowed by the Agricultural Wages Board may form the basis of the charge for the board of employees, but it is to be remembered that a deduction from this rate will require to be made in respect of the value of goods supplied from the farm. That is to say, the full rate would only be allowed as a deduction where the employee was wholly fed on goods purchased outwith the farm.

Difficulties are sometimes met where a claim is made for the board of a member of the family who works on the farm, but provided that the member of the family is employed in a capacity in which, if not a member of the family, he would have been entitled to board, the claim should be admitted.

Wages for Wife and Family.—Where the farmer's wife or his family work on the farm an appropriate wage should be charged against the farm profits, and provided the amount is appropriate to the duties performed no difficulty arises in having this charge allowed for Income Tax purposes. It is, however, necessary that the wages be paid in the normal way and entered in the books. The benefit to be obtained from this procedure is of course that each member of the family will obtain the benefit of the individual personal allowances which are referred to below.

The case of *Stott & Ingham v. Trehearne* (1924) should be mentioned in connection with this question of the payment of remunera-

tion to members of the family. In that case a father employed his two sons in the business, their remuneration consisting of salary and a commission on the profits at a rate fixed orally at the beginning of each year. For some time the commission was at the rate of 5 per cent, but was subsequently increased to 10 per cent and later to 33½ per cent. During the period for which the rate of 33½ per cent applied the entire responsibility of the business was thrown upon the sons owing to a breakdown in the father's health. Both sons had special knowledge of the business, and the firm claimed that the whole of the remuneration paid to the sons by way of salary and commission should be allowed as a deduction in arriving at the profits of the years involved. On appeal it was decided that the rate of 33½ per cent was not on a commercial footing and that only up to 10 per cent could be regarded as paid to the sons for services rendered as managers of the business and as deductible in arriving at the profits of the business for Income Tax purposes.

A similar decision was given in *Johnson Brothers & Co. v. Commissioners of Inland Revenue* (1919). In that case sons were employed in subordinate positions in the business and received 25 per cent of the net profits by way of remuneration. There, it was held that the three sons were neither partners nor persons concerned in the management of the business and that the payments in question were not in their entirety sums wholly and exclusively expended for the purposes of the business. A constant sum of £250 per annum was allowed for each of the sons.

It will be seen, therefore, that where members of the family are involved, the remuneration paid to them must have regard to the amount which would be payable on a commercial footing in order that it may be allowed as a deduction from the profits.

PERSONAL ALLOWANCES.

Every taxpayer is entitled to a certain part of his income free of Income Tax. Married persons are, however, treated together for Income Tax purposes, no separate allowance being granted, with the one exception of the special allowance to a wife who has earned income. Where a wife has earned income in her own right, in addition to the normal earned income relief, an allowance of four-fifths of the earned income up to a maximum of £110 is given.

The first part of an individual's or married person's taxable income is chargeable at reduced rates. At present the amounts are £50 which is chargeable at 3s. in the £ and £200 which is chargeable at 6s. in the £. In the case of a married person this relief was, until 1948-49, only given on the combined incomes. From 1948-49, however, where a wife has earned income, this income is chargeable at the reduced rates in addition to charging the reduced rates on other income. Considerable relief may, therefore, now be obtained as a result of a wife being in receipt of earned income.

For 1949-50 the method of granting relief in respect of premiums on life assurance policies is to be altered in the case of all policies

taken out after 22nd June 1916. The alteration is being made primarily with a view to facilitating the operation of P.A.Y.E. Where the total premiums do not exceed £25, relief is to amount to tax on £10 or on the full amount of the premiums, whichever is the less. Where the total premiums exceed £25, relief is to be tax on two-fifths of the premiums.

The relief is to be given as a deduction from income in the same way as personal allowances and the effective relief will, therefore, depend on whether the taxpayer is liable at the standard rate of tax or only at one of the lower rates. This has the effect, where the total premiums exceed £25 and the taxpayer is only liable at the reduced rate of 3s. in the £, of giving effective relief at approximately 1s. 2d. in the £ on the premiums (two-fifths of 3s.), which compares unfavourably with the previous relief of 3s. 6d. in the £.

WOODLANDS.

It was originally provided in the 1948 Finance Bill that the occupation of woodlands managed on a commercial basis with a view to profit would be brought on to a profits basis for 1949-50 along with the occupation of other lands so managed. In the course of the debate on the Bill the Chancellor of the Exchequer agreed to withdraw the provisions in regard to woodlands and their assessment position remains unchanged.

Woodlands, whether managed on a commercial basis or not, and whether occupied by a company, partnership or individuals are still, therefore, assessable on one-third of the rental value of the land. Where, however, the land is managed on a commercial basis with a view to profit, the occupier may claim to be assessed on the basis of the actual profits. The election once made is irrevocable so long as the woodlands remain in the occupation of the person making the election, but it is thought that the transfer of occupation to a company may break the continuity. The claim must include all woodlands which are managed as one estate, but woodlands planted after 19th July 1916 may be treated as a separate estate provided notice to this effect is given within ten years of planting.

Since the election is irrevocable, the option to be assessed on a profits basis must be given careful consideration before being adopted. Broadly, if a substantial part of the woodlands is likely to come to maturity during the occupation of the person making the election it is unlikely to be of benefit.

MAINTENANCE CLAIMS.

Income from the ownership of property is assessable under Schedule A. on the basis of the annual value of the subject assessed. This annual value forms the basis of the gross assessment under Schedule A. and broadly is the full rent at which the property is worth to be let. From the gross assessment or gross annual value

is deducted an allowance in respect of repairs known as the "statutory repairs allowance." In Scotland a deduction is also allowed in respect of the rates payable on the property by the owner for the year of assessment. The amount of the gross annual value as reduced by these deductions is known as the "net annual value," and it is on this figure that Income Tax is payable.

The statutory repairs allowance is calculated on a graduated scale according to the gross annual value of the subject to be assessed, except in the case of land where the allowance is a fixed amount equivalent to one-eighth of the gross annual value including the farm buildings. The statutory repairs allowance, therefore, bears no relationship to the actual expenditure on repairs.

Where property is owned and occupied for the purposes of a trade or business, the expenditure on repairs will be allowed as a deduction from the business profits. Where, however, the property is let, or owned and occupied for private purposes, a claim, known as a "Maintenance Claim," may be made where the average of the actual expenditure on repairs for the five years preceding the year of assessment exceeds the statutory allowance, resulting in the excess being allowed against the assessment. It is usual for the expenditure to be made up to 31st March in each year, but any other date may be adopted provided it is adhered to year by year.

The items which comprise a Maintenance Claim include the cost of maintenance, repairs, insurance and management. No expenditure on improvements or expenditure of a capital nature can be included in the claim with the exception of expenditure on additions or improvements to farm houses, farm buildings or cottages, where it is incurred in order to comply with the provisions of any statute and provided that no increased rent is charged. If the expenditure comes within a Maintenance Claim it will not qualify for the Agricultural Buildings Allowance referred to earlier.

The claim cannot be restricted to one property of several which are managed together as one estate, but must embrace the whole estate. Whether or not several properties are being managed as one estate is a question of fact on which the decision of the General Commissioners is final. The fact that the properties are under the management of the same factor does not necessarily mean that they are managed as one estate.

The expenditure to be included in a claim may be the expenditure by the person owning the property at the time when the expenditure was incurred and not necessarily the expenditure of the claimant. That is, in the case of a new owner, if the previous owner's expenditure is available it may be included in a claim by the new owner until his own expenditure for the preceding five years is available. In the case of a new owner, as a first step to a claim the previous owner should be asked if he is able to supply a statement supported by vouchers of his expenditure on repairs for the last five years of ownership.

Where the expenditure for the preceding five years is not available, subject to a concession mentioned below, no claim can be made for the first year of ownership, and a claim for the second year

must be based on the assumption that the expenditure in the four years prior to ownership was nil in order to ascertain the average for the purposes of the claim. In some cases where it is known that the previous owner incurred certain expenditure, but the amounts are not available, the statutory allowance may be included for the years prior to the new ownership.

By concession, where the claimant has owned the property for a period of less than five years, the Inland Revenue will allow the new owner's actual expenditure for each of his first five years of ownership to be taken—*i.e.*, until the expenditure for the five years preceding the year of claim is available. The claim is of course in respect of the excess of the actual expenditure over the statutory allowance. It appears that, if advantage be taken of this concession, it is possible to receive in total over the first five years of ownership allowances in respect of repairs in excess of the actual expenditure on repairs since, if the expenditure in any of the first five years falls short of the amount of the statutory allowance, no claim would be made for those years and the statutory allowance would be given.

Except in the case of agricultural buildings, the relief is restricted to the amount of the net annual value of the property. In the case of agricultural buildings, however, any excess maintenance over the net annual value of the property may be set off against other income or carried forward or set off against future income from the property.

Whilst, strictly, a Maintenance Claim is by way of repayment, relief will be given in the assessment if it is made and proved sufficiently early. Collection of the tax will not, however, be deferred for the completion of the claim, and claims must be made within six years of the end of the year of assessment to which they relate.

PARTNERSHIPS.

Where the business is carried on in partnership, the assessment is made on the partnership in one sum, but the individual personal allowances applicable to the partners are given in the assessment. The treatment is otherwise the same as in the case of an individual, with the disadvantage, where any of the partners were previously employed in the business on a "board free" basis, of the board not being a charge against the partnership profits.

It should be mentioned that a partnership for Income Tax purposes is not created merely by agreement but must be supported by the actings of the parties. In this connection reference might again be made to *Calder v. Allanson* (*supra*). There, a father claimed to have transferred his interest in the farm to his son and three daughters. He remained the rated occupier and owner of the land and there was no tenancy agreement and no rent paid. No accounting took place among those claimed to be partners. A partnership agreement did, however, exist for at least part of the period affected, but this was the only real evidence of partnership and it was held that no partnership existed. If, therefore, a partner-

ship is claimed to exist, those in partnership must have the usual rights of partners and there should be a proper accounting between or among them.

COMPANIES.

Business has increasingly in recent years come to be carried on by companies rather than by partnerships or individuals, and it is proposed to consider shortly the advantages and disadvantages of company trading.

When a business is carried on by an individual or in partnership the whole of the profits earned fall to be included in the total incomes of the owners of the business for Sur-tax purposes. Sur-tax, except in special cases, is not payable by companies, but it is a tax on incomes of individuals in excess of £2000 per annum. When, therefore, the business is carried on by a company, Sur-tax only becomes payable in so far as the profits are distributed to individuals. This position resulted in avoidance of Sur-tax by the withholding of profits, and legislation was enacted with a view to compelling certain companies to make reasonable distributions, and in the case of investment companies provision was made for automatic treatment of the whole of the profits of the company as the income of the members. The automatic treatment does not, however, apply to estate or trading companies or to that part of the income of an investment company which is estate or trading income. There is, therefore, now no Sur-tax benefit to be obtained from the formation of a purely investment company, but in spite of the "reasonable distribution" legislation which applies to certain companies under the control of five or fewer persons, material benefits can still be derived in other cases. This is particularly the case owing to the present policy of restriction of dividends.

If the business is carried on by a company, the wife may be appointed a director, and director fees paid appropriate to the duties carried out, which would qualify for the special allowances.

On the other hand a company comes within liability to Profits Tax, whereas individuals and partnerships are exempt. Profits up to £2000 are, however, exempt, and these are computed after deduction of director's remuneration, limited in the case of director-controlled companies to £2500 or 15 per cent of the profits, whichever is greater. The rate on non-distributed profits is, however, 10 per cent, and any Profits Tax payable is a deduction from the Income Tax liability, making an effective rate with Income Tax at 9s. in the £ of 5½ per cent. The lowest rate of Sur-tax levied on incomes over £2000 is 2s. in the £, or 10 per cent, and it is clear, therefore, that unless the rate of profits tax is materially altered the balance of advantage still lies with the company.

Finally, the legislation regarding expenses of all directors and certain employees contained in the 1948 Finance Act and applying for 1948-49 onwards leaves the director in a materially worse position than the proprietor or partners of a business as regards expenses.

THE COMPOSITION AND FEEDING VALUE OF GRASS AND CLOVER.

By PROFESSOR S. J. WATSON, D.Sc., F.R.I.C., F.R.S.E.,
Principal, The Edinburgh and East of Scotland College of Agriculture.

WITH the present emphasis on grassland as one of the most important, if not the most important, source of protein for our farm livestock, it may be of interest to consider its feeding value. Sufficient information is now available to enable us to judge this with some degree of accuracy, and it will be seen later that it is possible to classify it sufficiently well to enable the grazier to use it to the best advantage.

It is not generally realised that the foundation of this work was laid as long ago as 1885 in Scotland by Dr David Wilson.¹ Though he was not the first man to tackle this question of the composition of grass, he did appreciate the possibility of classifying it according to the stage of growth, a characteristic feature which, it will be seen, can be used as a simple means of gauging its value to the animal.

The earliest recorded work in the United Kingdom on the chemical composition of grass is that of George Sinclair, who published an account of his work at Woburn in 1825. The results do not help us much, mainly because of the shortcomings in the methods of analysis which were employed.

This was followed in 1853 by the experiments of Way, who grew pure species of grasses in plots and sampled them for analysis. His figures are based on a single sample and the grasses were divided into two main groups, the natural and the artificial grasses. The latter group included clovers and a few other plants such as plantain, burnet, and yarrow. The only feature of note in this work is the level of the protein, or flesh-forming principles as Way calls this fraction. The values for the artificial grasses were averaged and the protein content was 19 per cent as compared with 11 per cent in the so-called natural grasses.

It is clear from the work of Wilson and of all modern workers that it is not possible to give one figure which is representative of any particular species; there is a wide variation in the chemical composition of all grassland herbage at different times of the grazing season. We now know, for example, that the value of 11 per cent of protein in the dry matter which has been quoted as Way's estimate of the value of the natural grasses is an unfair one and characteristic only of mature herbage. The full tables of Way show that

¹ Dr David Wilson will be better known to many under his later title of Sir David Wilson, Bt., of Carbeth, who was Chairman of Directors of the Highland and Agricultural Society in 1906 and 1907 and Honorary Treasurer from 1913 to 1930.

the legumes generally are rich in protein, but these were collected for analysis in June, whereas the grass samples for the most part were taken in June or July, at a later date. The highest value for a grass was obtained with Soft Brome (*Bromus mollis*), the lowest for Quaking Grass (*Briza media*). The former was, however, collected in early May, the latter at the end of June. It is thus impossible to compare these grasses on a basis of their equivalent stage of growth. Way also analysed a number of weeds, but here again they were only sampled at one time of year, in this case late June and up to mid-July.

In 1886 a paper was published by Sutton and Voelcker in which fourteen species of grass were analysed, but here again it is not possible to value them properly owing to a complete lack of information as to the stage at which they were cut. It was about this time that Wilson was carrying out a comprehensive series of experiments at Carbeth, Killearn, Stirlingshire, and he published the results in the 'Transactions' of this Society in 1886 and 1889. These two papers make interesting reading to-day and show a complete understanding of the various factors which control the composition and feeding value of grasses and clovers. It is a great pity that this work has never received the attention which it deserves, and it is seldom quoted.

So apt are many of Dr Wilson's deductions that no apology is needed for lengthy quotations from his original papers, which will repay careful study. It was clear that in setting out his experiments Wilson was influenced by American and German work, which showed that there were wide differences in the composition of any grass at different stages of growth. Various grasses and clovers were grown in rows and these were cut at different dates, the produce was weighed and analysed. Careful notes were kept of the stage of growth of the plants at each cutting.

The first paper deals with a number of well-known grasses and there is also some preliminary work on clovers. It is the generalisation on the composition of the plants that is most important, and the following extracts from his paper are as true to-day as ever they were.

With reference to composition, he says: "It may be stated generally, that as the grass advances to maturity, the percentage of water in the green grass diminishes greatly. In the dry matter the percentage of albumenoids diminishes greatly; the ash and oil generally diminish, but less regularly and to a less extent. The woody fibre and extractive matter free from nitrogen, on the other hand, increase. The greater the amount of albumenoids they seem to be the more easily digested, so that the digestibility of albumenoids also decreases as the plant grows older."

"As the value of albumenoids is four to five times that of carbohydrates commercially, the decrease in the quantity of albumenoids in the grasses as they get older means a great diminution in the value of the nutritive matter they contain."

"Compared with the difference of composition at different

stages of growth, the differences between the composition of the various grasses cut at the same stage are small."

No fault could be found to-day with any of these statements, and all investigations made subsequently have confirmed these findings. The digestibility of the protein, or albumenoids as Wilson calls this constituent, was measured by a laboratory method. This is similar to the procedure adopted to-day to measure the digestibility in the laboratory, so that the figures which are given in the original paper may be taken as indicative of the relative value of the protein in the different plants when fed to animals.

It is certain from the figures that the feeding value of the various species investigated falls with the onset of maturity, the chief measures being the fall in the protein and the rise in the woody fibre. Not only does the protein fall in amount, but it also decreases in digestibility, so that the decline in the digestible protein with age is marked. It is interesting to see that Wilson values the protein much more highly than the carbohydrates. Whether or not the relative values differ to-day to quite the same extent is a matter for conjecture, but there is no doubt that our main need on the farm is to produce digestible protein in order to balance the more easily grown starchy or sugary foods.

The third extract is most important and shows how clear a view Wilson had of the whole question. It points out very clearly that it is the stage of growth which will determine the feeding value of the plant. This statement was made in relation to the comparison of a number of selected grasses; similar indications were obtained for clovers, but these were investigated more fully in the later stages of the work, which was published in the second paper and to which reference will have to be made later.

There are some other statements in the paper which are evidence of the complete understanding which Wilson had of the real meaning of his experimental findings, many of which he put into practice in his own farming operations. He noted, for example, the high analytical value of short grass in the autumn, of which he writes: "It may be thought that the high nutritive value of the young grass cut in October is not borne out by practical experience. It must, however, be remembered that when the temperature is low animals require more food, and at this season, though the quality of the young growth is good, the quantity is small." This seems to me a better understanding of the possible shortcomings of autumn pasture than these which are usually put forward. That young grass in late autumn may have a high value consistent with its analysis is made in the original paper by Wilson, who must have been an acute observer. He proceeds: "I have observed that hardy cattle like West Highlanders, in a plentiful pasture, fatten more rapidly in September and the first half of October than at any other time. Autumn butter is also often found to be particularly rich. That this cutting was entirely composed of succulent young leafy herbage is the reason it shows such a high percentage of albumenoids, and it may fairly be taken to represent pasture of this kind at any time of the year." This passage brings out the

value of young succulent herbage, whenever it is produced. It would be interesting to know if the richness of autumn butter was based on its fat percentage alone or also on the deep yellow colour which often accompanies the feeding of young grass and which is now known to be an index of its high vitamin value.

There is also a reference to that other curious feature about grassland herbage, its capacity for keeping animals thriving and in high production during dry periods when it seems impossible for them to be obtaining much sustenance from the dried-up sward. "The amount of water consumed in a succulent pasture by *sheep* may be excessive. Sheep do not require more than about two parts of water to one of dry matter, which means that if the green grass contains more than 65 to 70 per cent of water, they must consume more than their normal amount. The excess of water has to be raised to the temperature of the body at the expense of the heat-giving elements of the food, which are thus wasted." So far the argument strengthens the case made for the possible shortcomings of very young grass, whether it be in autumn or not, but the quotation goes on: "This helps to explain how sheep in a dry and hot season are often found to maintain their condition, and even to improve when kept on a pasture which seems comparatively bare of food. Besides this, of course, there is more dry matter, and therefore more food in proportion to the appearance of the grass than in a wet season."

The true basis of comparison of the feeding value of any grassland herbage is the dry matter produced as well as its composition, a fact clearly understood and stressed by Dr Wilson in his two papers.

The work on the clovers described in the first paper was of a preliminary nature and is considered later when fuller information had been gathered. It was obvious that the legumes are richer in protein than the grasses at comparable stages of growth, and on this basis their inclusion in seeds mixtures is advocated, whether for grazing or for hay.

In the second paper great stress is laid upon the need for comparing the different grasses and clovers only at similar stages of growth. Examples are given to show how misleading a single analysis can be, and the cudgels are taken up on behalf of chemical analysis, with a plea for its proper interpretation. "Some recent writers," says Dr Wilson, "have said that chemical analyses are of no real value, because they do not coincide with the likes and dislikes of animals. I am inclined to ascribe this opinion largely to a neglect of the differences due to maturity; for all the analyses of grasses previously published in this country have been made at one more or less advanced stage of their growth, and are thus no criterion of their relative nutrient value in a pasture. As pointed out in Part I. (the first paper), it is not the case that the palatability of foods is invariably a measure of the feeding materials they contain; but if it were true that in a mixed pasture animals refused to eat certain grasses, which showed good results in the laboratory, it is evident that their nourishing constituents would

be of little use. This, however, is not my experience. On the contrary, I have observed that the taste of animals for different grasses, so far as can be judged by the closeness to which each sort is grazed, is in accordance with the results of analysis, if these be fairly interpreted."

Need any more be said, especially when it is realised that Wilson backed up his small-plot experiments with larger scale practical tests of seeds mixtures under commercial conditions? He had a true idea of palatability and emphasises the effect of stage of growth on this property. Even to-day it is common to see or hear of tests of palatability which lead to wrong conclusions. As an example a field was seen recently, half of which was laid down in a mixture which contained commercial strains of certain grasses, the other half with indigenous strains. Dairy cows turned into this field ate down the half under commercial seeds and left the other half untouched. It was incorrectly assumed from this that the indigenous strains, of the same grasses be it noted, were less palatable than the commercial strains. Actually the latter were in this case somewhat earlier in growth and were at a suitable stage for grazing when the cows were turned in, so, naturally, they were eaten off first. The indigenous strains were grazed later and were eaten, in their turn, just as readily. Had the cows been first turned into the field at a later date it is certain that the commercial strains would have been past their best; the indigenous strains, starting into full growth later, would have been at a more succulent stage, and they would have been eaten off in preference to the commercial strains, and it would then have been claimed, improperly it should be remembered, that the indigenous strains are more palatable.

In the second paper Wilson has summarised all his analyses of grasses and clovers and this is done on a basis of stage of growth without reference to the individual grasses and clovers which were included in the work. So important is this table in the light of modern views of the feeding value of grassland herbage that it is printed in full below, the various fractions being named in conformity with modern practice.

The similarity of these figures to those obtained by modern workers is close and will be obvious to anyone who has a detailed knowledge of such data. The quotations already made from Wilson's first paper describe very neatly the changes in composition which occur with the onset of maturity. The figures for the digestibility of the protein are low by present-day standards, but show the decline in the value of this constituent as the plant becomes fibrous with advancing age. The clovers, it will be seen, follow the same general trend as regards changes in composition, the striking point throughout being the high protein content at all stages of growth. On the other hand, the protein content of young undergrowth, as Wilson calls very young leafy grass, is rather below the level which modern work such as that of Woodman, at Cambridge, has established for such herbage.

Reading the original papers, it will be found that there are certain minor differences between the various grasses examined,

TABLE I.—AVERAGE COMPOSITION OF GRASSES AND CLOVERS AT DIFFERENT STAGES OF GROWTH.

	Number of Analyses Averaged.	Percentage Water.	Composition of 100 parts dry matter.					Percentage of Protein Digestible.	
			True Protein.	Non-protein Nitrogenous Compounds.	Ether Extract.	N-free Extrac-tives.	Ash.		Crude Fibre.
GRASSES.									
Young undergrowth	21 complete	74.50	13.66	3.13	4.64	46.23	11.43	20.91	60.1
Longer undergrowth, before shooting.	6 complete } 11 partial }	74.92	9.08	2.80	2.55	47.71	10.31	27.55	60.1
Shot, but before bloom, one or two beginning to show bloom.	11 complete } 12 partial }	76.26	7.93	2.84	3.02	47.65	9.07	29.49	52.6
Coming into bloom and till full bloom.	9 complete } 6 partial }	72.59	8.30	2.56	2.34	47.53	8.47	30.80	55.8
After bloom till seed full sized.	2 complete } 5 partial }	67.33	5.77	1.24	1.49	52.78	6.85	31.87	..
Seed full-sized till ripe	13 complete } 7 partial }	65.66	5.29	1.22	2.27	48.51	7.95	34.76	44.6
CLOVERS.									
Very young leafy growth	1 complete	86.78	23.75	4.02	5.12	40.16	11.07	15.88	66.5
Young growth before bloom	6 complete } 7 complete }	80.92	15.70	4.36	3.74	47.60	11.41	17.19	67.3
In bloom	6 partial }	79.71	13.46	3.87	2.96	47.18	10.93	21.60	63.2
After bloom	2 partial	81.51	10.66	..	..	..	..	29.86	..

and each one is described separately, but the main differences lie in the yields of dry matter and the distribution of the yield throughout the season. A great deal of the second paper deals with the question of seeds mixtures and the suitability of the different grasses for pasture or hay. It is outside of the scope of this paper to follow up this aspect of Dr Wilson's work but it merits attention. Not only is the question of suitable mixtures discussed from first principles, but the management is also dealt with.

The following extracts are reminiscent of much that is written to-day. "While a proper seeding is no doubt of great importance, I think the ultimate success of the pasture is more dependent on the land being clean and in good heart when laid down, and especially on the subsequent treatment of the young grass. Preceding the laying down of permanent grass here, the turnips have been well dunged in the drill, but the land and climate are unsuitable for eating this crop on. In the succeeding spring two bushels of oats per acre are sown, as soon after the middle of March as the ground can be got into proper order; but the grasses and clovers are not sown till about the last week in April. They are followed by a very light chain-harrow made for the purpose, and all well rolled."

"I believe this method of sowing grasses with a light seeding of corn, and cutting the corn green, to be the best method of laying down permanent pasture; but as it is often broken weather here in the end of July, and as there has usually been a considerable acreage under hay, and a deficiency of oats and straw, I have, with the exception of the four fields, allowed the oats to ripen, and tried to make it up to the grasses afterwards."

The directions given for the laying down of the seeds would be sound advice nowadays as they obviously were at the time they were first written. The question of a suitable nurse crop was also a matter of considerable doubt then as now, if we are to judge from the advice given. The nurse crop, it is interesting to note, was preferably cut while it was still green; fully shot, but with no kernels formed in the grain. This early cut assisted the seeds and the oats were put into sheaves and stooked, drying out to give an oat hay, which was very nutritious but rather difficult to make because of the climate. It will be noted, however, that this early cutting was not always practised, as the crop of grain was needed.

The passage about "making it up" to the grasses shows a realisation of the need for adequate nutrients in the soil if the ley were to get over the harmful effects of its competition with the cereal. This is a common difficulty and the need for subsequent manurial dressings is not so often appreciated as it was by Dr Wilson.

The immediate treatment of the newly sown grass is one of the greatest problems of grassland management, and in this direction, too, useful advice was given.

"What hurts the young permanent grasses most is allowing sheep to graze them the first spring or, even worse, to get on the stubble in the autumn. They pull up many of the most slender, and nip the heart out of the others. Unless the young grasses are

allowed to grow above ground they cannot form roots, and so do not gain strength or cover the ground; and if the ground is not covered, Yorkshire fog and other weeds will fill the vacancies."

Much of this reads like the most modern work, which would seem to have rediscovered the findings of the earlier experimenters. It is particularly interesting to see that the value of good root formation is emphasised, as is the dependence of a big root system on the aerial growth. Unless the grasses are allowed to grow at certain times of maximum activity the whole sward will suffer and the desirable components will not become firmly established, giving way to the poorer and less palatable plants. The lack of protection at certain seasons of the year is one of the most common reasons for the rapid deterioration of new leys, and overgrazing in spring and autumn is fatal to a sward, especially in its earlier years.

Dr Wilson continues with an account of his manuring, which was always full. To establish the mixture, particularly for the grasses, he top-dressed as early as possible in the spring with 3 cwt. superphosphate and 3 cwt. of kainit per acre. When growth had commenced in April a top-dressing of 1 cwt. of nitrate of soda was given. The time of application of the various fertilisers is sound, the nitrogen being given only when the plant was in a position to make use of it.

He liked to let the grass go for hay in the first year and stresses the need for early cutting, before the grasses are in full bloom. The beneficial effect of this early cutting on the aftermath is noted, and the value of this management is said to lie in the fact that the grasses will have had time to gain strength and cover the ground and are not at this stage injured by judicious grazing. It would be said to-day, of course, that by still greater application of the principle of judicious grazing the sward could be allowed to become thoroughly well established without having recourse to letting it get up for a hay crop.

In the system of manuring advocated, lime was not forgotten, being given at the most suitable point in the rotation, though the point is made that application after the grass is established will give as good a result as if it were applied before sowing down to grass.

The value of stock manure in subsequent dressings is stressed, although permanent grass has had finely ground bones or kainit. In later work Dr Wilson followed up the Cockle Park experiments, but did not get such good results with basic slag as the English centre showed. His interest in and knowledge of grassland show up in many others of his publications, but these are not so directly concerned with the subject of this article as are the two papers so fully described. In quoting from them some digression has been made from the main title of this article, but the extracts need no excuse; they are given to call attention to this most important piece of work, which can still be used as a basis for a rational utilisation of the grassland of the country. There were many publications between those of Wilson and the most recent accounts from Aberystwyth, Cambridge and Jealott's Hill, among others.

It is a curious fact that the similarity between different plants of the same family, if cut at the same stage of growth, is not always realised. It was not stated so clearly and categorically in this country after Wilson's time until Professor Fagan and his co-workers at Aberystwyth published their series of valuable papers on the composition of various grasses and clovers. In these there is a mass of data, so vast indeed that much of it is seldom used and, like the earlier work mentioned, it is too little known.

Fagan has compared many grasses, but as an example of his findings three may be taken. These include the useful grass cocksfoot and the two grasses, usually classed as weeds, Yorkshire fog and bent. All three were cut regularly at monthly intervals, so the figures represent a growth period of about four weeks in each case.

TABLE II.—COMPOSITION OF THREE DIFFERENT GRASSES AT SIMILAR STAGES OF GROWTH.

	Cocksfoot.	Yorkshire Fog.	Bent.
Protein . . .	24.3	23.9	18.9
Fibre . . .	22.3	16.1	23.0

The figures represent the amounts of protein and of fibre in 100 parts of dry matter in each of the grasses; in the fresh grass the values would be about one-fifth of those in the table. The protein and fibre values are given as being the simplest indications of the feeding value of the grasses that could be obtained. The protein is a good measure of the value of grassland herbage to which we must undoubtedly look for a supply of this constituent to replace that formerly imported in our protein-rich concentrates such as groundnut cake or meal. The fibre, on the other hand, is a measure of the woodiness and, hence, the relative digestibility of the fodder. The higher the fibre content the less digestible the foodstuff is likely to be and the lower its feeding value to the animal.

The figures really call for little comment; all three grasses have a high protein content, well above that required even by the most productive animal. The value for bent is lower than the other two, but is still very high. The fibre contents are low by the standards of such foodstuffs and it should be remembered that a good deal of this fraction will normally be digested. It would seem that, so far as composition goes, no account need be taken of the species. The legumes, incidentally, all have similar compositions at their various stages of growth, a fact clearly brought out in the first table which summarised the work of Wilson.

All this is not to say that bent or Yorkshire fog are as good grasses as cocksfoot; far from it. They will not yield as much, for example; they begin growth at a different part of the season and are often left uneaten till they are fairly mature and then become unpalatable and will occupy ground which could be taken

up by more vigorous, earlier, and leafier types of grass. The figures simply show that, if they are kept closely grazed, bent and Yorkshire fog are of high feeding value, though the former, at any rate, will never produce any worth-while yield, and will, in fact, be a measure of the deterioration which has taken place in the sward.

The Welsh studies have thrown further light on the reasons for the effect of stage of growth on the composition and feeding value of grassland herbage. The most striking feature with the advance of age is the increase in the relative amounts of stem present as compared with leaf. The younger the plant the greater will be the weight of leaf in proportion to stem. The analyses of Fagan also showed that this is not the whole story. The leaf is always much richer in protein than the stem and conversely the leaf is lower in its fibre content than is the more woody stem, as might have been expected. These facts are characteristic of both the grasses and the clovers, and is best illustrated by an example from Aberystwyth, where Fagan examined the composition of samples of Italian ryegrass cut weekly and cut monthly. This is a difference of a mere three weeks in growth period, and despite this the figures show wide variations.

TABLE III.—COMPOSITION OF LEAF AND STEM OF ITALIAN RYEGRASS, CUT WEEKLY AND MONTHLY.

	Cut Weekly.		Cut Monthly.	
	Stem.	Leaf.	Stem.	Leaf.
Ratio	1	to 3·5	1	to 2·4
Protein	17·0	25·6	11·1	14·9
Fibre	25·4	21·5	33·4	24·4

The first point to notice is that in the young grass there are three and a half parts of leaf to one of stem, whilst in another three weeks this ratio has fallen to under two and a half parts to each part of stem.

When, however, the differences in composition are also taken into account, the older grass is seen to be much poorer than the young, leafy material. In all cases the analyses of the leaf show higher protein contents than the stem. With the advance in age the leaf and stem both lose protein, the leaf markedly so, and the difference between them is less than in the younger stages. The fibre contents show the reverse trend, the stem being richer in this constituent than the leaf, both parts of the plant increasing in fibre with advancing growth.

The figures which have been considered so far all deal with the actual composition of the plants, though Wilson did measure the digestibility of the protein in the laboratory. We owe a great deal to the work of Woodman and his colleagues at Cambridge for our knowledge of the digestibility of grasses and legumes. In this work the animal was used, and it therefore gives a true picture of

the feeding value of the herbage as it affects livestock. The very complete and comprehensive series of experiments carried out at Cambridge showed the high nutritive value of young pasture grass under a variety of systems of management. These have been compared with more mature herbage and the results confirm fully the conclusions which had been adopted tentatively on a basis of analysis alone. Woodman has stressed the high feeding value of young grass, and it is this one fact which underlies the whole question of the conservation of grassland herbage for winter use. He was the first in this country to advocate the artificial drying of such material as a substitute for imported concentrated feeding-stuffs.

The work of the present author and his colleagues at Jealott's Hill Research Station took this work further and a large series of analyses were carried out with grassland herbage at different stages. These analyses were reinforced by digestion experiments so that the feeding value of the herbage could be measured with some accuracy. The figures thus obtained have been classified under five heads according to the stage of growth of the sward, which consisted in the main of grasses with a small admixture of wild white clover.

TABLE IV.—AVERAGE COMPOSITION AND FEEDING VALUE OF PASTURE GRASS.

	Composition of Dry Matter.		Starch Equivalent. lb. per 100 lb.	Protein Equivalent. %
	Protein. %	Fibre. %		
Very leafy . . .	22.2	20.0	60.0	15.5
Leafy	17.4	23.7	59.5	11.6
Little stem: early flowering stage .	14.6	26.2	59.2	9.2
Stemmy: flowering stage	10.6	27.2	55.7	6.6
Seed set: full flower	8.4	29.6	51.2	4.8

The number of classes into which the herbage can be divided is less than those given by Wilson in Table I., and the values for protein are somewhat higher, the figures for fibre lower. This latter discrepancy is probably mostly due to the methods of analysis adopted in the two cases. If the very leafy sample is left out of the table above the other values agree better with the figures obtained by Wilson.

The figures in Table IV. may be taken as a rough guide to the feeding value of grassland herbage, mostly composed of grasses. The first two categories need not be separated in practice, but if

they are grouped as "leafy" and the values for this latter classification are used, it should not be difficult to assess the herbage by eye and ascribe to it a value which should agree reasonably well with its true feeding value.

A similar table can be drawn up for the legumes based on the figures obtained in Germany by Kellner and which agree tolerably well with data for this country.

TABLE V.—AVERAGE COMPOSITION AND FEEDING VALUE OF CLOVER AND OTHER LEGUMES.

	Composition of Dry Matter.		Starch Equivalent. lb. per 100 lb.	Protein Equivalent. %
	Protein. %	Fibre. %		
Very young . .	25.3	18.2	58.8	18.8
Bud stage . .	20.6	24.1	55.3	14.1
Early flowering .	17.9	27.9	54.2	12.1
Full flower . .	16.5	28.7	52.0	10.2

There are four clearly recognisable stages in the case of the leguminous plants such as clover, and most of them will show values for their nutrient content which will not differ much from the figures in Table V. As has already been noted, the chief difference between the grasses and clovers lies in the digestible protein which these two types of grassland herbage contain. Other than this there is no need for any discussion of the values.

It is often stated that the clovers are better foods than the grasses, and yet they should not be compared directly because of their different growth characteristics. Each contributes to the sward at a different period of the year. The grasses will normally supply the early and the late grazing whereas, in general, the clovers will be the basis of the mid-season grazing, though they will naturally shade gradually into each other. The proper management of the grasses and clovers so that they may both contribute their maximum to the output of the sward without undue competition should always be the aim of the grazier.

The tendency nowadays is to develop a particular type of sward for use at a special time of year, and it may well be in the future that we shall not think in terms of the relation of grasses to clovers in the herbage but in terms of special components for use at varying times in the season.

It is not sufficient to consider only the energy and protein value of a foodstuff, though these are undoubtedly the most important features. Another important point for consideration is the amount of mineral matter which any plant contains and also

the different substances which go to make up the mineral matter. Here again we may refer to Wilson's data and it will be seen that the amount of ash, which is the other name for mineral matter, also falls with age of the plant. It is very marked in the case of the grasses, but the figures for the clovers are incomplete, though they indicate that the fall is not quite so marked in the case of legumes.

For most purposes calcium and phosphorus are the elements which are considered to be of the greatest value to farm animals, though our modern outlook leads to a closer study of other substances which are present in much smaller amounts. Indeed those which occur only in the merest trace, the so-called trace or minor elements, are now assuming the greatest importance.

Our information on the actual make-up of the mineral matter is not so full as it is for the other constituents in our farm food-stuffs, but it is more complete in the case of the two elements mentioned above. These can be shown to diminish as the plant ages, and so here again the stage of growth is of great value in measuring the calcium and phosphorus value of a sward.

The leaf is a better source than the stem, as it is with the protein, and so the degree of leafiness is a useful indication of the relative values of the elements under discussion. The leguminous plants incidentally are always better sources of calcium than the grasses, but this is not so in the case of the phosphorus. It may be accepted then that the leafier the plant the richer it will be in those mineral substances which normally occur in relatively large amounts.

Unfortunately this does not apply to the trace elements, whose presence depends entirely upon the status of the soil as regards the particular element in question. It is quite possible, for example, to have a grass which is leafy, and therefore rich in protein, in calcium and in phosphorus, and yet for it to be dangerously deficient in copper or cobalt. The only measure of such materials is the analysis of the plant or the soil on which it was grown, and modern spectrographic methods have largely increased our knowledge of this aspect of the composition of plants. It is a pity that this should be the case, but there it is, and luckily it applies only to those elements which are present in very small amounts; usually they have to be measured in parts present in each million parts of dry matter in the herbage.

The vitamins are substances which have assumed a great deal of importance as a result of modern investigations, and as a general rule the grasses and clovers may be looked upon as good sources of these valuable constituents.

From the point of view of the animal, the most important is vitamin A, which is the factor responsible for growth and general health, especially of the mucous membranes. In grassland herbage the vitamin is not present in this actual form but is found as carotene, a yellow colouring matter which can be transformed within the animal into the actual vitamin. It is this carotene, for example, which is responsible for the deep yellow colour which is so notable

a feature of the milk-fat of cows at pasture, especially when the herbage is growing actively.

In the plant itself this yellow colouring matter is completely overshadowed by the green pigments. These, by chance, are usually strongest when the carotene is highest, so that they are a useful indirect measure of this most important forerunner of vitamin A. It is a common observation that the depth of colour of any green plant is related to the amount of leaf present, so here again relative leafiness and stage of growth will be a measure of vitamin value, especially vitamin A, though the others follow the same trend. It has been shown that the protein and carotene in a growing plant are closely correlated so that the stage of growth will serve to measure the potential vitamin value of grasses and clovers, with special reference to vitamin A, the most important of all for farm animals.

It follows from what has been said that it is possible to place the feeding value of a grass or a clover with some degree of certainty by an examination of the stage of growth, or the relative leafiness of the plant at the time it is grazed or cut for feeding. There will be changes after cutting, but these belong to a study of the processes of conservation of green crops and do not come within the scope of this particular discussion except to point out that the degree of change will vary considerably with the method used to preserve the crop for later usage. The changes will be least in artificial drying, rather greater in ensilage, and may be very marked indeed in haymaking, especially in bad weather.

There are some special cases which must be considered in which the composition of grassland herbage and the general statements made about the stage of growth may be misleading, though they are not therefore necessarily incorrect.

First there is the effect of fibre on the value of the herbage. Young, leafy growth will, it has been pointed out, have a low fibre content, and this was dealt with as if it were always an advantage. Whilst a low fibre content will be associated with a high digestibility, it may be so low that the vital actions of the digestive tract of the animal are upset, and this may be particularly evident in the early spring following on a winter ration of a fibrous, relatively indigestible nature, especially if the change-over from one ration to the other is rapid. Horses and ruminants all need a certain amount of indigestible fodder if the bowels are to act properly and if the food is not to be hurried through the alimentary tract before the digestive juices have had an opportunity of acting. The scouring which may take place when cattle are first turned out to pasture in spring is well known and may have a serious effect on milk yield or live-weight if it is not controlled. The usual method is to turn out the animals for a short period only each day so that the intake of young, leafy material is kept at a reasonable level, the change-over to a full ration of grass being gradual. Another way of achieving the same end is to have a fibrous food, such as good oat straw, available in the field. The animals will be found to eat a diminishing quantity with beneficial effect.

Hoven, blowing, or bloat is also a trouble on some pastures at certain times of the year, usually when the herbage is young and succulent and liable to pack tightly in the rumen and form gas readily. It is usually accepted that it is more common with legumes though it may also occur with grasses, but in all cases it seems to be worst with relatively young, leafy material. At one time it was ascribed entirely to a deficiency of fibre, but modern work is showing that the presence of substances which inhibit the action of the rumen muscles is a more likely explanation. The trouble is not specific to all young, leafy material by any means, but serves to warn the grazier that local knowledge and an appreciation of the circumstances under which bloat may occur are essential in addition to being able to estimate the possible feeding value of the herbage from its stage of growth.

Another difficulty in assessing the feeding value of grassland herbage is the selective grazing habits of the animals, a factor connected with the palatability of the sward. These habits may upset any estimate based on the chemical composition of the pasture as a whole. Sheep on the hill, for example, will only graze the short, leafy grass at the base of the clumps or will be found only on the short, bare patches, avoiding entirely the areas of stronger, stemmier growth which may have been taken into account in assessing the value of the grazing land as a whole. Another example is the behaviour of the dairy cow when she is first turned into a fresh pasture. She will often go over the whole field biting off the leafy, rich tips of the plants, getting a ration very high in protein, mineral matter, and vitamins. Later she will be forced to eat the stemmier portions and the field will get less leafy and lower in feeding value daily. This will often be reflected in the yield, which will fall with time on the field, to rise again after a change on to a fresh sward.

The last and least explainable feature is the low feeding value of autumn herbage, even though it is of good analysis. It will be remembered that Wilson does not agree that there is always this unexplainable deterioration in feeding value in late autumn, but he is speaking of fattening cattle which do not show it as clearly as do dairy cows.

The workers at the Hannah Dairy Research Institute have suggested that it is due to a lowered value of the protein at this time of year. This does not appear to be the full answer because the efficiency of the protein in autumn grass came out higher in their trials than that of bean meal or groundnut cake, two good foods for milk production. Then again, if it is artificially dried, such grass will live up to its chemical analysis. It seems that some other factor is also concerned such as wet, cold morning temperatures or perhaps soil contamination, causing undue irritation of the bowels. Wilson also suggests undue succulence and its call upon the energy value of the food itself to raise the temperature of the extra water in the ration to body temperature.

Whatever be the reason, it seems that in some cases the true feeding value of autumn grass cannot be estimated closely from its stage of growth. This, however, emphasises the fact that it is not

only the composition of any foodstuff which will fix its value for the animal, it is essential also to know something of its probable effect on the body processes before it can be utilised to the full.

In conclusion we can say that the composition and feeding value of grass and clover can be estimated with considerable accuracy by taking into account its stage of growth. Each particular stage has certain characteristic features which should be allowed for when it is being grazed.

It is interesting to note that this was fully realised sixty-five years ago in Scotland and fully proved by Dr David Wilson, and that it was almost forty years before we rediscovered what he had so clearly stated. What a pity his findings were not applied more widely in practice, as they were with him on his own farm. If they had been, the utilisation of our grassland to-day would have been even better than it is and grassland herbage might have been taking its full and proper place in the feeding of our farm animals.

OBSERVATIONS ON THE PERFORMANCE OF SHEEP BREEDS OTHER THAN THE SCOTTISH BLACK- FACE ON AN ARGYLLSHIRE HILL FARM.

By W. M. BROWNLIE, B.Sc., M.R.C.V.S., D.V.S.M.,
Boots Pure Drug Co. Ltd., Research Department, Veterinary Science
Division, Thurgarton, Notts.

INTRODUCTION.

THE Scottish Blackface has for long been accepted as the breed best suited to the roughest Scottish hill grazings, though it has not gone unchallenged since hill sheep farming expanded into the northern and western parts of Scotland.

During the latter part of the eighteenth and early nineteenth centuries many Blackface stocks were cleared and replaced with Cheviots, but in the second half of the nineteenth century two factors brought the Blackface breed back into favour. One was the increasing competition from imported wool which threatened the market for home-grown Cheviot wool. The price of Blackface wool fell about the same time, but much less than the Cheviot, and this brought the value of the wool clips of the two breeds closer together. During the same period a series of hard winters had resulted in very much heavier losses in the Cheviots than in the Blackfaces, and the severe winter of 1860 appears to mark the turning point in favour of the latter.

Since that time the two breeds have become fairly well localised to particular areas: the Blackface on the poorer quality grazing, and particularly in the high rainfall areas; the Cheviot on the more favourable grazings—and that is roughly the position at the present time; the preliminary period of trial under hill conditions has passed and, broadly speaking, each breed is now restricted to the areas on which it has proved to be the more economic.

The Cheviot is the larger breed, and since it also yields a higher percentage of carcase than the Blackface it would obviously displace the latter if it could be kept on the grazings now carrying Blackface stocks, but by virtue of its superior hardiness and thriftiness under unfavourable conditions the Blackface has retained its hold on these areas: The Blackface has, however, been improved greatly in size, conformation and fleece weight, though the amount of such improvement that can be achieved is limited ultimately by the nature of the hill on which the sheep must live.

Improvement has been effected largely by visual selection, and in order to make this easier, and to safeguard the most valuable of the breeding sheep, it has become quite a common practice to

maintain flocks of stud ewes under favourable low-ground conditions where they are not exposed to the influences which cull so effectively among sheep stocks kept all the time on hill grazings.

It is quite frequently stated that this system of management of the flocks retained primarily for ram breeding has resulted in deterioration of the Blackface as a hill sheep; in other words, the selective influence of poor quality grazing and exposure to severe weather conditions has been largely excluded, and, though the system has enabled selection for desirable characters such as size and conformation, it does at the same time favour the retention of sheep for breeding, which, in spite of their excellent physical qualities, may be deficient in the essential qualities of thriftiness and hardiness that enable hill ewes to survive and rear lambs on rough hill grazings.

To what extent, if any, hardiness has in fact been lost in the Blackface breed as a result of this system it is impossible to say, though there can be no doubt that it has produced improvement in conformation and size, and as this in itself implies higher nutritive requirements in the improved animals they must be to some extent less well suited to very poor grazings than the indigenous sheep. Apart from that obvious increase in nutritive requirements there is no real evidence to show that Blackface sheep are, in their genetic constitution, any less hardy than their forebears, though a very large number of sheep farmers believe quite firmly that they are.

The system of ram breeding does, however, involve rearing the lambs on a high plane of nutrition after weaning. Often they are wintered indoors, and when sold as shearlings they are brought up into high condition at sale time. It is not surprising that such sheep often fare badly when put to work on a hill, and fall off in condition greatly by the end of the tupping season. The obvious loss of condition in in-wintered sheep after their first season on the hill, especially when these are compared with locally bred sheep that have not been forced so much for sale or show, readily suggests that the sheep produced by the low-ground system of breeding and by in-wintering is, in fact, "soft." It is necessary, however, to differentiate between softness induced by the system of rearing the ram lambs and due to that alone, and real softness—i.e., lack of true hardiness in the constitution of the sheep that has been passed on to him as part of his hereditary make-up by his parents and which he in turn may pass on to his progeny.

So long as we accept the theory that the genetic constitution of the animal is not affected by the environment in which it is reared, then if the ram is genetically a hardy sheep the system under which he is reared should not in any way affect the quality of hardiness he may transmit to his progeny.

On the other hand, even if the ram is essentially a very hardy sheep in that he has inherited real hardiness from his parents, and he is in-wintered, well fed and generally sheltered from adverse conditions, and then he is suddenly lifted from this environment and put to work on a bare hill and receives no hand feeding, it is

only to be expected that he should go back rapidly in condition and perhaps even be temporarily infertile. If this does happen, the farmer may well call him soft, but it is not necessarily an inherent lack of hardiness, and many such sheep, once they become accustomed to local conditions, go on in subsequent years as hardy and fertile sires.

The position is even further complicated on many farms by the presence of tick-borne disease. A sheep of any sort brought from a tick-free farm to tick-infested grazings is susceptible to tick-borne fever and louping-ill. No matter how hardy the sheep, if it has had no previous contact with those diseases, either by natural exposure or vaccination, it cannot be expected to be immune, and the fact that an imported sheep develops one of those diseases and dies or loses condition is not necessarily related to its true hardiness in any way. This confusion between hardiness and acquired resistance to disease leads to the classification of rams reared on infected grazings as hardy, and those reared on tick-free grazings as soft, when in fact the real difference may be only that the so-called hardy sheep have already acquired an immunity to tick-borne disease and the "soft" sheep have had no opportunity of doing so.

The excellent performance even on hard hills of some rams from tick-free farms is well enough known, and serious loss of hardiness is not, therefore, an inevitable sequel to low-ground breeding and in-wintering, but death or infertility may occur in such sheep when brought to a hill farm, and it may be quite unconnected with the innate hardiness of the animal itself.

Probably no breeder of domestic animals has a more complex task than the hill sheep breeder. The final limiting factor is, of course, the quality of the hill grazing itself, and particularly its quality in late winter and early spring. The number of stock carried, the breed and the quality of the sheep are determined largely by the availability of nutriment during this critical period. Very soon after the critical period, vegetation becomes abundant, but only those breeds and individuals within a breed that can survive the lean times and then recover quickly and produce a good milk yield off the still relatively coarse, though plentiful herbage, can become established as the fixed stock which harmonises with its environment. This implies also that, having completed her lactation, the ewe must be able to build up her severely depleted body reserves in the autumn when the quality of the vegetation is declining rapidly, and those familiar with true hill stocks know just how rapidly a healthy hill ewe will lay on condition even within a few weeks after weaning her lamb. The hill sheep breeder has, therefore, to maintain in his stock that degree of hardiness which will enable the sheep to live in this relatively unfavourable environment. Unlike the breeder of other livestock he cannot materially improve the greater part of the grazing to provide a higher plane of nutrition and so keep a larger and more profitable type of animal; nor is it economical to buy feeding-stuffs, and even if the arable acreage of the farm is adequate it would not be economic

to give over this area to provide the extra nourishment necessary to maintain a type of sheep which is out of harmony with the natural environment and unable to subsist at a satisfactory level solely off the natural hill grazings. Inevitably then with hill sheep more than with any of our other animals the stock must fit the grazing. At the same time the hill sheep breeder wishes to build on to this foundation of hardiness certain commercial characters which can be described as productive qualities—size and conformation to provide the greatest possible quantity of saleable material, weight of wool clip, and a degree of early maturity so that his livestock can compete with other breeds in the markets, and these qualities are such that they can find only limited expression under the conditions of hill grazing.

They can, however, be recognised and bred for more easily when flocks of stud ewes are kept under low-ground conditions, either all the time or at times when hill grazings are relatively bare, and if the enhanced plane of nutrition is maintained through a large part of the lamb's life the desirable qualities of size and conformation then have a full opportunity for expression, and sheep can be selected for these characters without the limitations which would be imposed by the need to maintain hardiness as well if the sheep were kept all the time on hill grazings. As a method for achieving rapid improvement in the qualities that concern the ultimate buyer of wool and mutton the method is reasonably satisfactory, but in the absence of any reliable external features which indicate hardiness within a breed, such a system does favour the survival of strains which may be less well adapted to hill conditions, although their performance may be outstandingly good under the conditions in which they were bred and reared.

There is no real evidence that this breeding system has in fact been responsible for disseminating less hardy strains of sheep over the Scottish hill grazings, beyond that which might be attributable to the increased nutritional requirements of the larger sheep, though it is possible that the emphasis laid on short, wide, flat bone, which is generally judged from the appearance of the cannon bone, may be out of harmony with the low availability of calcium and phosphate in hill grazings, and it also leads, along with selection for other desirable commercial qualities, to the development of a short-legged, thick-set, stocky type of sheep which is less well able to forage over rough hill ground.

The hill sheep breeders' ultimate aim must therefore be compromise all the way along. His ewes must be agile, active, foraging sheep able to rear a lamb well on hill grazings, and the ewe lambs must inherit those same qualities so that a stock can be maintained which fits the environment. The wether lambs, on the other hand, are required to conform to as high a standard of mutton quality as the hill conditions will permit, and the farmer is therefore at one and the same time aiming to breed for qualities that are in many ways incompatible. The result is a compromise, as it must be when the environment is relatively unfavourable and the plane of nutrition subject to extreme seasonal variations.

To effect and maintain improvement in the market qualities of the sheep the hill farmer relies mainly on purchased rams. The qualities which he wishes to develop in the wether lambs are those which, for the most part, can be recognised in the ram by inspection, though they are almost entirely dependent for their ultimate expression on the milk supply and mothering ability of the ewe, as is shown so clearly by the poor development of lambs which have lost their dams in early life. The first generation of lambs from hardy hill ewes by an improved type of ram, even if he is "soft," may therefore be excellent from the market point of view, and even the ewe lambs may still retain enough of their dam's hardiness to make them good hill sheep and of better conformation than their dams. But second and subsequent generations similarly bred might have all the potential of good conformation without the hardiness to maintain them and their progeny in an environment for which they have not been bred—in other words, the stock no longer fits the ground. Natural selection on the hill will eventually level such a stock by death and infertility until no more than a nucleus of hardy survivors remains, unless the farmer intervenes to stop what is an effective but very costly form of culling.

The ultimate test of hill sheep breeds and strains within a breed must be the hill itself, and no matter how "soft" stud rams may be, the female progeny have in the end to prove themselves on the hill. With natural selection operating there the strains or breeds best adapted to the hill survive and leave progeny to take their place; ill-adapted sheep tend to die out because of death and lowered fertility.

The Kerry Hill sheep brought on to Ardsignish show this fairly clearly, and they are generally considered to be the softest of the breeds introduced there. It is quite probable that a similar lack of adaptation occurs when genuine hill bred stocks are improved by the use of sires which have not in fact been bred from tried hill sheep; the first generation may carry the improvement and still remain well enough suited to the ground and even be better commercial sheep than their dams, but, as always, the farmers must compromise with his hill. It frequently will neither grow nor carry the type of sheep exemplified in some of the massive rams exposed at the annual sales, but what he knows as a "touch" of this improved type through the flock may give the farmer the slightly better quality he wishes to have in his stock without seriously impairing their suitability for life under hill conditions.

The Ardsignish Trial.—In view of the alleged deterioration of the Blackface breed it was decided to try to introduce on to Ardsignish Farm, on the Ardnamurchan peninsula of Argyll, some other hill breeds to see how they would compare with the local Blackface stocks. A further reason for trying other breeds was that the market demand for Blackface wool did not then appear likely to be maintained, and it was sometimes stated that the Blackface was much more susceptible to maggot-fly attack than the other British hill breeds. It was hoped also to gain some

information on the cause of the high mortality (over 40 per cent) in Blackfaces brought to the farm in previous years.

In June and July 1944, gimmers of various hill breeds were brought to Ardsignish; they were vaccinated before despatch and again after arrival with louping-ill and braxy vaccines, as both diseases occur on the farm, and with lamb dysentery vaccine to confer some further measure of immunity against anærobie infections. The breeds selected were Shetland, North Country Cheviot, Swaledale, Derbyshire Gritstone, Kerry Hill and Improved Welsh Mountain, and they were procured as far as possible from flocks of good representative type. Thirty sheep of each breed were purchased, except Shetlands, of which only twenty-four were available. The Shetlands and Cheviots came direct from their original farms to Ardsignish, the English and Welsh breeds went first to Thurgarton Farms, Nottingham, where they were vaccinated and retained for a short period before going north by rail, steamer, and lorry to their final destination.

Long journeys are known to have an adverse effect on stock, and a relatively heavy initial mortality in these sheep was directly attributable to a form of pneumonia common in sheep transported long distances; the same condition occurred to some extent in Blackface sheep making the reverse journey from Ardsignish to Nottingham. In addition to the initial loss from pneumonia, some of the recovered animals were left with chronic lung lesions, which prevented them from thriving and contributed to their death during the following winter. Sulphonamide treatment was found useful in acute cases and was eventually adopted as a routine for rams brought to the farm from distant markets. It was not used extensively in the purchased gimmers at the outset, otherwise the ultimate mortality would probably have been lower, and many had developed permanent lesions before treatment was given. Many of the gimmers were recorded at the time of arrival as having a slight cough and some eye and nasal discharge, and if such a long distance movement of stock were repeated, routine medication of them all with sulphonamides at their destination would be a safe precaution, particularly if any of the sheep showed signs of respiratory trouble.

The Gritstones and Kerry Hills were most severely affected at the time of arrival, the incidence of pneumonia being higher in the Gritstones than in any of the other breeds, and the ultimate high mortality in them in the first winter was partly due to chronic lung lesions. As all the breeds from the south had been subject to similar journeys the greater susceptibility of these two breeds cannot be ascribed to any undue hardship in transport which was not also experienced by the other breeds. These, however, were the largest of the breeds coming from England, and at the same time they are generally considered to be the least hardy of the breeds selected.

Although the sheep were purchased as fifteen-month-old eild gimmers, some of them lambed while at Nottingham, and one lambed on the journey. Nine Welsh, two Kerry, and one Gritstone

had lambs on arrival at Ardsignish, and one Welsh had given birth to a dead lamb. The Gritstone and Kerry lambs died before the winter was over, but five of the Welsh survived to the following year, one of the ewe lambs remains in the flock as a breeding ewe, and two of the male lambs have gone off the farm as adult wethers, a creditable performance, as these were hoggs' lambs and the gimmers themselves survived the first winter without loss. The total stock introduced in July 1944 was :—

	Cheviot.	Welsh.	Kerry Hill.	Swaledale.	Gritstone.	Shetland.	TOTAL.
Gimmers .	30	29	29	29	30	24	183
Lambs .	..	9	2	..	1	..	

On an unfenced farm with a small labour staff it was not considered advisable to turn the sheep immediately on to the open hill, and they were kept for a short period in an enclosed piece of rough grazing of about 150 acres, then the gate leading to the hill was opened and the sheep gradually drafted out from the enclosure. Contrary to expectations the new breeds did not spread out on the hill as it was hoped they would. This was probably due largely to the good quality of the near-home grazing and the roughness of the hill beyond it, and also in some measure to the fact that when any had crossed the hill they tended to wander right off the farm altogether and it was then frequently necessary to take them back to their starting point. Six sheep of each breed were taken to the farthest and roughest part of the farm but all eventually found their way back to the better part of the hill and, as regular herding could not be done, they were allowed to remain there with the others. The part of the hill adjacent to the original enclosure was perhaps the best grazing on the farm, and though some sheep did wander from time to time, they tended to concentrate on this better grazing much more than was desirable.

This area was already stocked with Blackfaces, and at the time of drafting out the ewes in autumn as many Blackfaces as could be spared were drafted from this part to make room for the newcomers. The latter eventually dominated the area almost completely, the local Blackfaces which remained giving way before the new sheep and moving out to other nearby parts of the hill. It was surprising to see the local breed relinquish superior grazing, but the newcomers, with the exception of the Swaledales and to a lesser extent the Gritstones and Cheviots, showed no inclination to move to the rougher hill, and to-day most of them can be gathered without disturbing the majority of the Blackfaces.

The Swaledales did tend to move out eventually. Some still graze the better part of the hill, but others have taken over part of the rougher hill and return to it after each gathering; a few of them eventually settled out near the northern march of the farm, mingling freely with the Blackfaces and thriving well on typical mixed hill grazing.

SHETLANDS.

The Shetland sheep were not run with the rest of the new sheep, but were herded on to some good grazing near the shore, from which a small island was accessible at low tides. They did eventually adopt this area as their main grazing, but unlike the other breeds they foraged far and wide out on to the hill and across the boundaries for several miles, so that it was seldom possible to gather them all at one time. The wide foraging character is a highly desirable one in hill sheep, but in this case where labour was not available for constant herding, and the farm march on this side was adjacent to unstocked deer forest, the difficulty in gathering the swift and elusive Shetlands outweighed their other advantages. The main area they grazed was lightly stocked with Blackfaces though the two breeds did not mix, but the Blackfaces utilised the grazing well and reared good quality lambs on it. There was, in fact, ample grazing for the Shetlands without foraging so far afield. Owing to the death of the Shetland ram before the first tupping season the Shetlands were not bred pure that year, and in subsequent years they were crossed with a Blackface ram. The cross lambs grew into very good wethers and, owing to the difficulty of gathering the sheep, and because pure Shetland wether lambs have little appeal in the market, no further attempt was made to breed them pure.

For commercial purposes on the average hill the farmer would be strongly tempted to cross the Shetlands in order to produce a more marketable type of lamb. The greater value of the Shetland wool clip per pound was largely off-set by the lowness of the yield, which averaged 2·8 lb. with a range of 1·5 to 3·75 lb. This yield at current prices made the Shetland clip more valuable than the lower priced but heavier Blackface clip, but the higher market value of Blackface wether lambs and cast ewes ruled out the Shetland as a commercial breed on hills capable of carrying a Blackface stock. On rough, rocky, and steep wooded hills, however, the Shetland might find a place where the other heavier and less nimble breeds would not fare so well.

The Shetland is reputed to be relatively insusceptible to blow-fly attack, and during a period of three years only one sheep was struck, though this one was struck in two successive seasons. The Shetlands on Ardsignish grew a rather coarse fleece with the base of the staple closely felted in such a manner as to make it almost impossible for a blow-fly to oviposit near the skin until after the sheep were clipped, and blow-fly larvæ, if they hatched, would have found it difficult, in many of the ewes, to penetrate as far as the skin before they became desiccated.

GRITSTONES.

Fertility in all the introduced breeds was low in the first year, the Kerrys and Gritstones bearing no lambs at all. Eight gimmers

of each of these breeds had in any case been withheld from service owing to their poor condition and in some cases to chronic respiratory symptoms resulting from the initial "transit pneumonia" infection.

The Gritstone ram died in the following spring as a result of a head injury, and it was not considered advisable to replace him as the mortality in the ewes had been high in their first winter and those remaining were in poor condition and appeared quite unlikely to be suitable for the hill.

The remaining Gritstones, after the initial heavy mortality (sixteen out of thirty died in the first year), lived and lambed much better than their initial performance suggested as likely; when crossed with a Blackface ram they reared good lambs which graded off well, and when wintered on the hill the lambs grew into heavy wethers at two to three years old, which found a ready sale in the store market.

It was not possible to record all the deaths occurring in the new breeds, and even when a carcass was found, unless it was quite fresh, the viscera had often been removed by birds and animals, so that the real cause of death often could not be established. During the winter and spring, grey crows, ravens, and black-back gulls very soon tear open a carcass, and quite frequently the animal is partly eviscerated and the eyes and tongue removed before death.

Six of the sixteen Gritstones which died in the first year had pneumonia, four were drowned in a steep-sided hill burn in the winter, where they were no doubt tempted to venture on to difficult ledges by the tufts of grass which persisted in the shelter of the banks. Blackface hogs were also drowned in the same stretch of water until the most dangerous part of the bank was fenced. Strong healthy sheep either resist the temptation of such dangerous grazing or have the strength to get themselves out again. Weak sheep tend to stay in the shelter, grazing the accessible herbage until it is finished, and are apt to finish up on perilous ledges from which they have not the strength to extricate themselves. The Gritstone, although high in the leg, is not a nimble sheep, and the ledges they attempted to graze were suitable only for agile sheep. The Shetlands could probably have grazed them quite well, but though they had access to them they never attempted to do so, and sought a change to fresh grazing by travelling out over the hill. Of the remaining six Gritstones which died only one carcass was fresh when examined, but apart from extreme leanness no pathological condition was observed.

Even months after their introduction the Gritstones gave the impression that they required better grazing than the locality provided. Individuals under observation tended to discriminate in their grazing, taking a few bites then moving to take a few bites somewhere else as if constantly seeking some type or quality of herbage that was either scarce or absent from the hill altogether.

The other breeds did not appear to be more selective than

sheep normally are, apart from their general tendency to remain on the green grazings when cleaner though coarser fare was available farther out on the hill.

WELSH AND KERRY HILL.

Even when they were herded off on to the rough, most of the new breeds soon returned, headed generally by the Welsh sheep, whose preference for succulent grass was an outstanding feature at all times. An open gate, a bad fence, or a gap in a wall leading to the arable fields near the farm buildings was inevitably found by them; even a small gap in a fence, too small to permit the passage of a Blackface or other horned breed, was soon widened by them and used, too, by the Kerrys, who usually grazed in fairly close company with them.

Over the course of a year the total intake of more nutritious grazing by the Welsh and Kerrys must have been quite appreciable, as they were sometimes in fields for several days before they were noticed. This intake was reflected in the lambs of the ewes most prone to breaking into arable fields, as they were quite appreciably larger than most of the other Welsh lambs. As the Welsh ewes proved fertile and good mothers, and the lambs thrived and graded off well, it was unfortunate that the ewes did not take to the rough hill, where, had they continued as productive, they would immediately challenge the Blackfaces. As it was, they refused absolutely to remain on what would be considered typical hill grazings, and much more intensive herding than was possible on Ardsignish would have been required to keep them on it.

The Improved Welsh Mountain is not the type inhabiting the greater part of the Welsh hill farms, but was developed by selection for conformation and yield and quality of wool. It is possible that selection for these characters was carried out at the expense of true hill qualities; in any case, although the ewes lived well, produced good lamb crops and reared their lambs well, they did so off grazing which was on the whole much better than that provided by the greater part of the hill.

In actual productivity the Welsh can be compared with the Kerrys, which usually grazed in fairly close company with them. In almost every respect the Welsh were superior, their death-rate was lower, the lamb crops higher, and the quality and wintering ability of the lambs was better, the ewes themselves always looked better, and the Kerrys were superior only in weight of wool clip.

CHEVIOTS.

The Cheviot ewes (North Country type) which came from Scotland were not subject to the same long journey as the breeds from England, and no symptoms of respiratory trouble were observed in these after arrival. They did show more inclination

to travel off the best of the grazing than the Welsh, Kerry and Gritstone sheep, and some of them became established on a portion of better hill near the original grazing to which they returned from time to time, but only in spring, when food was scarce, did they show much inclination to forage, and this never took them very far afield.

During the tupping season of 1944 the Cheviot ewes were kept in an enclosure, which proved later to be heavily infested with liver-fluke, though this was not known at the time. In the spring of 1945, however, several of the Cheviots showed severe symptoms of liver-fluke, and at least two died as a result of this disease. No post-mortem examination of the other Cheviots which died was possible owing to decomposition or evisceration, and it is a matter of speculation what part liver-fluke played in this high death-rate; it was perhaps quite significant, particularly as in subsequent years the death-rate in the Cheviots was low.

A similar heavy spring mortality from fluke occurred in the Blackface flock within a short period in March and early April, when the effects of fluke infestation are most severe and in their more acute form may appear quite rapidly. All the sheep had been treated for fluke in the routine fashion at the time of the November dipping, but on many farms, as on Ardsleighish, this is not enough and further treatment in spring is necessary, otherwise the combined effect of pregnancy, poor spring grazing, and liver-fluke may result in death or unthriftiness and poor mothering of the lamb if the ewe survives.

Of the larger breeds, only the Cheviots had lambs in their first year on the farm, and at all seasons they looked better than the Kerrys and Gritstones. The incidence of twins was high in the Cheviots (over 23 per cent of the pregnant ewes had twins in 1946, and over 16 per cent in 1947)—this is an unduly high proportion for a hill flock where only a few pairs are required. In the Blackface flock on the farm the incidence was usually about 5 per cent to 8 per cent, and this was more than adequate for twinning on to ewes which had lost their lambs. The incidence of twins was reflected in the unevenness of the Cheviot lambs at weaning, and the smaller twin lambs were at a disadvantage when required to winter under hill conditions. As in the Blackfaces and other breeds, twins were commonest in the early part of the lambing season, probably because early œstrus and multiple ovulation tend to be associated in the more rapidly thriving animals in the autumn.

SWALEDALES.

The Swaledales on arrival at the farm were in good condition, and although one died of pneumonia within a few weeks of arrival they, along with the Welsh, seemed to have least difficulty in adapting themselves to the new conditions.

All the sheep from England had been very closely shorn by machine before despatch, and while this was probably an advantage

to them on the journey, a spell of cold wet weather set in soon after their arrival and all breeds sought sheltered grazing and frequently stood for long periods in shelter without grazing. As stated earlier, some of the Swaledales moved out eventually on to more typical hill grazing, mixed more freely with the Blackface stock, and lambed along with them on the rough hill. No other breed did this, apart from the Shetlands, and the Swaledale lambs born and reared on the open hill were among the best of the Swaledale lambs. It appeared probable that if given the opportunity the Swaledales would be satisfied to stay on the hill and could establish themselves on the type of grazing which, after all, constituted the greater part of it.

Recorded deaths in the Swaledales were : two due to pneumonia, one due to liver-fluke, and one, which had been accidentally mated before the normal time, died at lambing in very poor condition and extremely heavily infested with ticks. The carcasses of the others were not recovered early enough for a diagnosis to be made.

FERTILITY.

In all breeds fertility in the first season was low. This infertility, had it occurred in only one breed, might have been attributed to low fertility in the ram, but it occurred in all the new breeds, and in the case of the Shetlands, which had access to the Blackface rams on the hill, and the Cheviots, in which after an accident the Cheviot ram was replaced by a Blackface, the infertility must be attributed to the females.

This relative infertility was possibly a physiological reaction to the change in environment, though it may have been due in part also to the effects of tick-borne disease, since the sheep, which arrived on the farm in June, missed the spring period of tick activity and received their first serious infestation of ticks in the autumn just before tupping time. It is perhaps significant that those breeds which in subsequent years seemed best adapted to local conditions and most productive, were those which reared lambs in 1945.

The Gritstones and the Kerry Hills were all barren in the first season, though in the case of the Kerrys this could have been due to the ram which showed respiratory symptoms and a rise in temperature soon after arrival on the farm in October. The temperature dropped to normal after treatment with sulphonamide, but as it is recognised that rams which have shown a sustained febrile reaction are usually infertile for some months afterwards, the probability is that the ram in this case would have been infertile even with normal ewes.

It seems probable that the change to a new area had either retarded the onset of the breeding season or suppressed it, so that only a few of the sheep exhibited full oestrus with ovulation. In subsequent seasons this aberration was righted, and only the Kerrys showed low fertility.

The number of ewes tupped in 1944 and the number of lambs born is shown in the accompanying table. The Welsh and Swaledale lambs were pure bred, all but one of the Cheviots had Blackface cross lambs.

Details of fertility and lamb crops in subsequent years are shown in Table I.

FERTILITY IN 1944-45.

Breed.	Kerry.	Welsh.	Cheviot.	Gritstone.	Swaledale.	Shetland.
No. of ewes with ram	20	29	28	16	28	24
No. of lambs born	0	10	9	0	5	2

Eight Kerry Hill and eight Gritstone gimmers withheld from service.

DISEASE AND TICK INFESTATION.

So far as the acclimatisation of the various breeds on Ardsignish is concerned, the resistance to disease was supplied as far as possible by vaccination against louping-ill and braxy, and also by the use of lamb dysentery vaccine to confer immunity to some of the anaerobe diseases of sheep other than lamb dysentery itself caused by the lamb dysentery bacillus or closely related bacteria, and in so far as those diseases are concerned the results were satisfactory. No high incidence of any one disease was observed for which control measures were not already available, apart from poverty in late winter and early spring. As the plane of nutrition cannot be raised, control of the known diseases, and particularly parasitic disease, is the main line of approach to this problem, together with methods of breeding and selection for the hardiness which enables ewes to withstand hill conditions.

During their first spring on the farm all the breeds suffered heavily from tick infestation. The degree varied in different individuals, some of all breeds were severely infested, but the Swaledales suffered most of all. This was probably partly because most of the other sheep tended to keep to the better grass-covered grazings with short herbage less suitable for tick survival, and affording less opportunity for transfer of ticks to the sheeps' fleece, while the Swaledales often travelled on to the coarser hill with longer herbage, such as bent-grass, from which questing ticks were readily transferred to the fleece.

The short-fleeced clean-legged sheep, such as the Welsh, Cheviots and Kerrys, when moving across the grazing contact the herbage mainly with their legs and feet, but the longer fleece of the Swaledales tends to brush the herbage, so that in travelling across any one area the chance of a longer-fleeced breed picking up ticks is increased. In the case of the Blackface the same tendency was

TABLE I. FERTILITY, 1945-47.

Year.	Breed.	No. of Ewes at tupping.	No. of Ewes at marking.		No. of Lambs marked.	Multiple Births.	Lambs as % of Ewes at marking.	Ewes without Lamb at marking.		% of Ewes with no Lamb at marking.
			With Lamb.	Without Lamb.				Infertile or aborted.	Fertile. Lamb not reared to marking.	
1945-46	Kerry	24	13	10	15	1 set triplets 3 sets twins	65.2	6	4	43.5
1946-47	"	21	13	6	13	..	68.4	4	2	32.1
1945-46	Welsh	28	21	4	23	3 sets twins	92	1	3	16.0
1946-47	"	25	20	3	20	..	87	1	2	13.0
1945-46	Cheviot	23	21	2	26	5 sets twins	113	0	2	8.7
1946-47	"	23	18	5	20	3 sets twins	87	1	4	21.7
1945-46	Swaledale	22	19	2	22	3 sets twins	104.8	0	2	9.5
1946-47	"	19	19	0	20	2 sets twins	105	0	0	0.0

observed, and in long-fleeced Blackfaces many ticks picked up in this fashion travelled right up over the body and obtained final attachment on the top of the neck or shoulder; the bare parts on the underside of the body were usually less heavily infested in heavy-coated Blackfaces, because so many of the ticks followed the wool fibres up towards the back and either lodged there or died, presumably of desiccation and exhaustion, in their effort to penetrate through the dense fleece to the skin. In shorter and finer-wooled Blackfaces the mechanical pick-up of ticks seemed to be much as in the Swaledale, many finding attachment on the underside of the body or on the neck or shoulder to which the lighter, more open, fleece gave ready access.

In subsequent years tick infestation in the Swaledale was never again so severe as in the spring of 1945. Whether this was due to the development of any specific degree of immunity to ticks is not known, but in part at least it was due to the Swaledales in later years developing a denser fleece with the fibres more tightly felted towards the base of the staple and much less easily penetrated by ticks than in 1945, when infestation on the body surface was severe.

The development of abscesses at the site of tick bites is common in lambs and similar lesions occur sometimes, though less frequently, in older sheep, particularly in hogs. Many of the new sheep showed severe and widespread lesions in 1945, though infection did not seem to spread, or at any rate to become established in any other part of the body; quite severe local swellings occurred in later years, more frequently in the Kerrys than in the other breeds, in which the incidence was not noticeably higher than in the Blackfaces.

WOOL.

In 1945 fleece yields were in most cases low, due to shedding. Some of all the breeds showed this to some extent, ranging from complete loss of wool to the loss of part of the fleece, more commonly from the fore-end and underside of the body. During periods of nutritional stress the fleece fibres share in the general deficiency, and in winter and spring thinning of the fibres commonly occurs. In extreme cases a complete break in the fibre occurs, and when conditions improve and normal fleece growth is re-established, the new fleece grows out lifting the old lightly attached fleece away from the skin and this readily drops away or is pulled off by contact with the coarse herbage. Fleece shedding is occasionally seen in Blackface ewes and hogs and it was not confined entirely to the new breeds.

Although there was some degree of shedding in all breeds it was most widespread and severe in those breeds which were thriving best under the new conditions; the Welsh and Swaledales were

about equally affected, the Cheviots rather less and the Gritstones and Kerrys least of all. Complete shedding of the whole fleece or all except one or two small tufts occurred only in the Welsh and Swaledales. The lowest fleece weight in the Cheviots in that year was 0.5 lb., and in the Kerrys and Gritstones 2.25 lb. and 1.75 lb. respectively. The shedding in the best-thriving breeds was probably due to the earlier and more rapid growth of the new fleece, when fresh growth had not started, or was proceeding only slowly, in the heavier breeds. Shedding was not so extensive in subsequent years, although it did occur and the breed incidence remained much the same.

The values of the various wool clips emphasise a point that has often been brought up in discussions on Blackface wool—namely, that the return is dependent almost entirely on weight of clip. So long as a market is available for Blackface wool with little regard to quality, then little effort is likely to be made to produce a type of fleece for any market quality other than weight. From the breeder's point of view, of course, this is an advantage, as it reduces the number of characters for which he has to select and leaves him free, if he wishes, to breed sheep carrying a high proportion of kemp in the fleece, which is undesirable for the manufacturers' purposes, though quite a number of breeders believe that its presence is to some extent an indication of hardiness.

In the other breeds brought to Ardsalignish the average weight of fleece per sheep was always less than in the Blackfaces, and though the price per pound of Cheviot wool was considerably higher than that of Blackface wool, because of the greater weight of the Blackface fleece, the latter was the more valuable. As the Blackface breeder is at the same time relieved from the need to select for fleece quality apart from weight and what he considers to be most weather resisting or desirable in other respects, it is clear that so far as wool is concerned none of the other breeds offers any advantage over the Blackfaces except the Shetland.

The average values per fleece in 1946 and 1947 are shown below:—

Breed.	Kerry.	Welsh.	Cheviot.	Swaledale.	Shetland.	Blackface.
Average value of Fleece	67	44.75	64	48.5	84	71.5
(pence)						

The Shetland fleece was the most valuable, the average yield (2.8 lb.) being considerably higher than normal, but it was accompanied by deterioration in the quality of the wool as compared with the native Shetland. Even if the inferior quality were not reflected in a reduced price, the increased value of the Shetland clip would not outweigh the other market disadvantages of the pure-bred Shetland.

TABLE II. EWE COUNTS AT MARKING AND TUPPING.

	1944.		1945.		1946.		1947.				
	June-July.	December.	June-July.	December.	June-July.	December.	June-July.	December.	Deaths over 3½ years.	Total Breeding females (excluding Hogs), December 1947.	Ewe Hogs in stock, December 1947.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Kerry . .	29	28	26	24	23	21	19	19	10	26	4
Welsh . .	29	29	29	28	25	25	23	23	6	36	7
Cheviot . .	30	28	24	23	23	23	23	23	7	34	7
Swaledale . .	29	28	22	22	21	21	19	19	10	30	10

MORTALITY.

The total mortality in the ewes over a period of three and a half years was as follows :—

Kerry.	Welsh.	Cheviot.	Gritstone.	Swaledale.
34·5%	20·7%	23·3%	60%	34·5%

If, however, the initial mortality in the first year is excluded, the total loss over a two and a half year period was :—

Kerry.	Welsh	Cheviot	Gritstone.	Swaledale
26·9%	20·7%	4·2%	25%	13·6%

The mortality in the Blackface stock sheep over the same period was approximately 8 per cent per year. The percentage mortality of the Welsh is the same for three as for two years, as there were no losses in the breed in the first year. In the Cheviots, on the other hand, all the losses occurred in the first eighteen months and none in the next two years. Similarly, in the Gritstones, the greater part of the mortality occurred in the first winter, though losses continued in subsequent years at a lower level. The actual numbers in the flock each year are shown in Table II.

Obviously initial mortality is no sure guide to subsequent performance. Too many factors other than the innate hardiness and adaptability of the breed interfere; in this case, the initial respiratory infection in the Gritstones and, to a lesser extent, in the Kerrys and Swaledales, and exposure of the Cheviots to liver-fluke infestation in their first autumn. On the other hand, the Welsh were handicapped by about 30 per cent of them having lambs in their first year—*i.e.*, as hogs—in spite of which they survived the winter without loss. Excepting the Kerrys and Gritstones, the mortality was no higher than in many Blackface flocks in Argyllshire.

LAMB CROPS.

The lamb crops in the various breeds in the years 1946 and 1947 are shown in Table I. In a few cases accidental cross-breeding occurred when rams broke out before the tupping season or into the enclosure of other breeds during tupping. In such cases the lamb was credited to the breed, though cross lambs were not retained and the replacement numbers were reduced according to the number of cross lambs born.

Table II. shows the number of breeding females and the mortality over a period of three and a half years. At the end of this period the Welsh, Cheviot, and Swaledale had restored their total number of ewes and gimmers to slightly above the initial intake of gimmers.

The actual numbers would have been a little higher had not five of each breed been used for crossing in 1946.

Details of the Shetlands and Gritstones are not included in Tables I. and II., as it had been decided after the first year not to breed them pure.

Although these figures are for the period 1944-47, the lamb crop of 1945—the first year of acclimatisation—was so low as to be negligible (only two home-bred ewes remain in the flock, one Welsh and one Swaledale, from this lambing), and this failure to breed was probably partly a physiological aberration and partly due to intercurrent infection with tick-borne disease. The totals may therefore be regarded as the result of two years' breeding. In practice, of course, the low initial fertility in the ewes, even if solely physiological, constitutes a hazard which might militate against the establishment of a home-bred flock at full numbers, as the old ewes would ultimately have to be cast and the burden of maintaining numbers then falls on the home-bred sheep earlier than it otherwise would.

The number of breeding females in December 1947 is shown in Table II., column 10. If the numbers of original purchased ewes is deducted from these figures the home-bred breeding stock then consists of seven Kerrys, thirteen Welsh, eleven Cheviot, and eleven Swaledale, all of which are gimmers, except one Welsh and one Swaledale. As the Kerrys had no lambs as gimmers, lamb crops of 65 per cent and 68 per cent in the following years do not suggest that the breed could become established on the hill unless the mortality were extremely low in the home-bred sheep passing into the flock.

Lamb crops do not in themselves reveal the whole position; for instance, the Cheviots had 113 per cent of lambs at marking in 1946, but two of the ewes were barren; in 1947 the lamb percentage was 87 per cent with three sets of twins, and 21.7 per cent of the ewes barren (mainly through death of the lambs at or soon after birth). Under hill conditions fewer twins and a higher proportion of the ewes rearing single lambs is desirable, even if the lamb crop is lower than the 87 per cent of the Cheviots, since the smaller twin lambs are less well able to winter under hill conditions than single lambs.

The proportion of barren ewes in June is shown below :—

PERCENTAGE OF EWES WITH NO LAMB AT MARKING.

	Kerry.	Welsh	Cheviots.	Swaledale.
1946 .	43.5%	16%	8.7%	9.5%
1947 .	32.1%	13%	21.7%	0.0%

In most cases the barren ewes had lambed, but the lambs failed to survive. In the Kerrys, however, ten out of the sixteen ewes which failed to rear a lamb in the two years were apparently infertile or aborted at such an early stage that no evidence of

pregnancy development could be detected in the udder. This poor breeding was not due to repeated infertility in the same individual in succeeding years, but to alternating fertile and infertile seasons in different individuals.

The lamb crops in each year, except 1945, expressed as a percentage of the ewes, compare favourably with that in the Blackface stock on the hill, except in the case of the Kerrys. In 1946 the Blackface lamb crop was just under 80 per cent. All except the Kerrys exceeded this. After the severe winter of 1946-47 the Blackface crop fell to 65 per cent. All the other breeds had higher crops. The figure for the Blackfaces is reduced by the failure of the gimmers, only 43·2 per cent of which succeeded in rearing lambs, but even in the age group corresponding to the new breeds the lamb crop was under 70 per cent. It would be unwise to deduce from this that in a hard winter the other breeds are likely to do better than the Blackfaces, as the numbers are not comparable and the new breeds were allowed into an enclosure of rough grazing in early spring which was normally reserved for lambing, and this doubtless helped them when hill conditions were very hard.

The first full lamb crop of the new breeds had to winter on their home grazings with their dams over the severe winter of 1946-47. The mortality in the Blackface hogs in that year was unexpectedly low. The number of hogs wintered and the death-rate is shown below :—

Breed	No. at November 1946.	No. Clipped June 1947.	Over Winter Mortality %.	No. remaining December 1947.
Blackface .	234	220	6·6	..
Kerry .	9	9	0·0	7
Welsh .	15	14	6·6	13
Cheviot .	14	13	7·1	11
Swaledale .	13	12	7·7	11

The percentage gimmer intake shown in the final column would be enough in all cases to maintain replacements in a flock casting aged ewes in the normal manner.

Up to this time (1947) the performance of the progeny could not be assessed, but it is on their adaptability to new conditions that success or failure in establishing the breeds would depend.

LAMB PRODUCTION ON ROUGH HILL GRAZING.

In order to get a better picture of how the various breeds might thrive on typical rough hill grazing, several ewes of each breed were brought into hill enclosures in April 1946 about three weeks before lambing was due to begin. From these groups seven ewes of each breed with single lambs were kept in hill enclosures through the summer and the lambs weighed at intervals. A group of Blackface ewes of the same age were run with them as controls.

Fig. 1 shows the growth of the lambs throughout this period. Owing to the high proportion of twins in the earliest lambing

52 PERFORMANCE OF SHEEP OTHER THAN SCOTTISH BLACKFACE.

Cheviots, some later-born lambs had to be included to make up the number.

Three different enclosures were grazed by the sheep during the summer; these carried a small amount of heather, a high proportion of rough hill grasses such as flying bent and mat grass, while there were a few small areas carrying better grasses including fescues and sweet vernal.

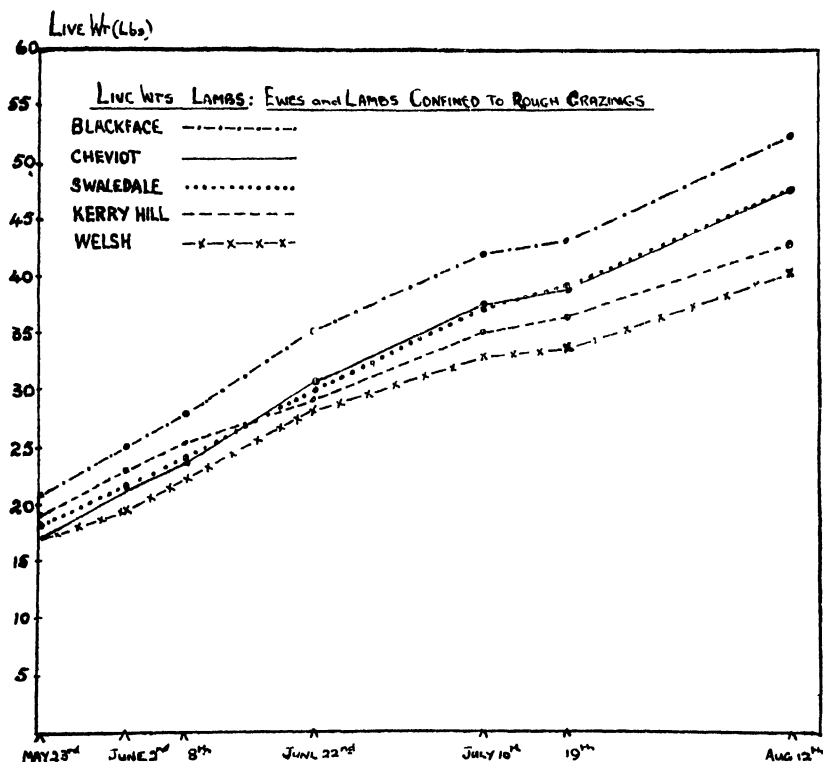


Fig 1—Shows the growth of the lambs

Under these conditions the Blackface lambs finished heavier than any of the others. As in making other comparisons between the Blackfaces and the new breeds, the method of selection always presented difficulties owing to the great disparity in numbers. In this case, although the sheep selected were all of the same age, most of the new breeds in the trial were nursing their first lamb, whereas the majority of the Blackfaces had probably had lambs in the previous year. On the other hand, ewes that have been barren one year have had an extra year to build up body reserves. The advantage to the Blackface of a previous pregnancy may therefore not be so great, and it is felt from observation that the results give a truer picture of the probable performance of the

various breeds on the hill than could be gained by comparing lambs reared on the rough hill by the Blackfaces and on the better grazing by the new breeds.

The average weights of the ewes at the beginning of the trial and in October after weaning of the lambs were :—

	Kerry.	Welsh.	Cheviot.	Swaledale.	Blackface.
April 3 .	98.5 lb.	73.0 lb.	99.5 lb.	89.5 lb.	88 lb.
Oct. 4 .	122.5 lb.	89.8 lb.	125.3 lb.	109.75 lb.	104.5 lb.

CARCASE VALUE OF LAMBS.

Lambs of each breed were graded after a period of three to four months on aftermath grazing. In 1917 a group of medium Blackface lambs was included with them, and in 1918 a group of the best Blackface lambs.

The carcase weights and carcase values are shown in Table III.

In each year the carcase as a percentage of the liveweight was highest in the Welsh and lowest in the Swaledales and Blackfaces. The unusually low carcase percentage in the Swaledales followed the introduction of a new ram in the 1917 tupping season. The lambs were late born in 1918 and of poorer conformation at weaning than in previous years.

The Blackface lambs graded in 1918 were not average lambs, but some of the biggest wether lambs weaned.

TABLE III.

Year	Breed.	Carcase Weight (lb.).	Carcase Value.
1916	Kerry . . .	24.0	43s. 6d.
	Welsh . . .	24.1	43s. 9d.
	Cheviot . . .	26.0	46s. 11d.
	Swaledale . . .	25.0	45s. 2d.
1917	Kerry . . .	26.5	60s. 11d.
	Welsh . . .	25.5	58s. 9d.
	Cheviot . . .	27.7	63s. 6d.
	Swaledale . . .	25.2	58s. 1d.
	Blackface . . .	26.0	59s. 10d.
1918	Kerry . . .	30.5	71s.
	Welsh . . .	25.0	58s. 9d.
	Cheviot . . .	30.5	71s.
	Swaledale . . .	25.0	58s. 9d.
	Blackface . . .	31.25	72s. 8d.

CONCLUSIONS.

In actual value the return from wool is higher in the Blackface than in the other breeds brought to Ardsleighish, except the Shetland.

Low lamb crops in the Kerry ewes make them a less productive breed on Ardsignish than the Blackface, although the grading value of the Kerry lamb would probably be greater than that of the average Blackface.

High fertility and low mortality in the Cheviots on the best grazing at Ardsignish, combined with a high average return from graded wether lambs, suggest that the Cheviot might be more suitable than the Blackface for the best parts of the hill grazing. Rate of growth and final weight of Cheviot lambs confined with their dams to typical rough hill grazing does not, however, suggest that they would ultimately provide any greater return on the hill. The result of confinement solely to such grazing on subsequent fertility and lamb quality could not be measured.

The Welsh ewes returned a high value of wether lamb carcase per ewe, though this value was largely offset by the lower live-weight of the lamb. The value of the wool clip was lower than that of the other breeds. Lamb crops were high and the lambs were noticeably uniform. There is no indication that they would prove more suitable than Blackfaces for a hill farm such as Ardsignish; on the contrary, they with the other short-wooled breeds failed to adapt themselves to typical rough grazings, and their performance under rough hill conditions was not equal to that of the Blackface.

The Swaledales appear at this stage more likely than any of the other breeds to adapt themselves to hill conditions. Their return in wool and grading value of the lambs is lower than the Blackface, though the higher percentage of lambs reared might balance this disadvantage if the same performance were maintained with larger numbers.

No full comparison of all the breeds with the Blackface would be possible unless all shared the same grazing and were in more nearly comparable numbers than are present on Ardsignish. Bearing in mind the difference in grazing, the results so far do not suggest that any other breed is likely to show a clear superiority to the Blackface, though this will be more readily seen after a few years when the flocks of all breeds consist of home-bred sheep acclimatised to the hill.

There was no evidence of particular breed susceptibility to disease. Blowfly attack, to which the Blackface is sometimes said to be more susceptible, was effectively controlled throughout most of this period with D.D.T., and the incidence was not then high in any breed.

An important criterion of the suitability of a breed for a hill farm such as Ardsignish is the ability of the ewe-hoggs to winter on the farm and grow well enough to be suitable for breeding as gimmers. The indications are at present that the short-wooled breeds, particularly the Kerrys and Cheviots, will not winter at home as well as the Blackfaces and Swaledales, though sufficient time has not yet elapsed to provide a definite answer on this point.

The measures adopted to prevent the loss normally expected in sheep brought to tick-infested grazings proved satisfactory. In

the light of experience the losses probably could have been reduced further by prompt treatment of respiratory trouble at the outset; by the use of D.D.T., which was not available in 1944, to prevent mass infestation of ticks and ensure more gradual acclimatisation of the sheep to this infestation, and by regular treatment for liver-fluke and parasitic worms through the winter and spring.

At the present time it seems likely that much more could be done to improve hill sheep farming by the rational control of known diseases, for which treatment or preventive measures are already available, than by attempting to substitute another breed for the existing one. When that is done the reduced mortality and increase in lamb crops will allow selection and culling which at present is almost impossible on many hill farms. The results in this trial, although it is not yet complete, suggest that the Blackface breed is unlikely to be displaced by any other on rough Scottish hill grazings. As, however, the Blackfaces with which these new breeds have been compared are acclimatised sheep bred on the grazing, this gives them a very considerable advantage in a comparative test, and the differences between the Blackface on the one hand and the Swaledale, Welsh, and Cheviot on the other may not be so marked when home-bred acclimatised sheep of all breeds are available for comparison.

THE TITHE OF PLANT DISEASE.

By JOHN GRAINGER.

A TITHE is "a tax of one-tenth, especially one payable in kind." It often has an ecclesiastical association, usually regarded as unfortunate by people who have to pay it. Farmers in the West of Scotland are collectively subject to a tithe, payable in kind, not, indeed, devoted to the Kirk, but insidiously levied by plant disease. The annual value of crops of all kinds in the west is probably some £22,000,000, and plant diseases account for a loss of potential produce which cannot be far short of £2,250,000. My Department of Plant Pathology at Auchincruive is entrusted with the task of minimising this loss in the West of Scotland. It gives research and advisory services, is linked with the county extension staff, and maintains contact with other advisory and research stations at home and abroad. The present paper is an assessment of the problem, a review of progress, and an orientation of future work.

SERIOUS DISEASES.

The two most serious diseases of agricultural crops in the area are undoubtedly Potato Blight and Club-root or Finger-and-toe of turnips and swedes. Both crops are of relatively high value per acre, and both diseases cause, when unchecked, at least 15 per cent damage to the crop, when averaged over a period of years. Blight probably still causes an average loss of about 10 per cent, in spite of the partial application of known economic methods for its control.

Potato Blight.—Blight arises from wind-borne spores of the fungus *Phytophthora infestans* which passes the winter in some way not fully known at present. It attacks the foliage and frequently causes quite spectacular destruction. Very detailed records from triplicated plots of five varieties over the last four years at Auchincruive do not suggest, however, that this destruction of the foliage causes any substantial reduction of yield. The real loss arises from infection of the tubers, and all measures of control should be directed towards the prevention of this infection. The most effective way to accomplish this is to destroy the foliage at least two weeks before lifting. Formerly used sprays of copper sulphate and salt have now given place to sulphuric acid, which is very effective but corrosive. Our own trials with sodium chlorate have shown it to be effective when used at the rate of 12 lb. per 100 gallons of water per acre. At this rate, it is the cheapest destructive spray, and Mr A. D. C. Main of Windyedge, Perth, has used it very satisfactorily on a large scale over a period of years.

Sodium chlorate is, however, not very effective in rain, which reduces the activity of most haulm-killing agents, and efforts are being made at Auchincruive to render the spray more rain-proof. Tar acid compounds are excellent foliage-destroying agents, but are at present too expensive for general use.

The time-honoured method of controlling Potato Blight is to spray the foliage with Bordeaux mixture or other copper-containing compound, which reduces the spread of the fungus on the leaves. Since it is unlikely that a large increase of yield would follow the use of such "protective" sprays, their greatest use in the West of Scotland is that of auxiliary treatments for preventing the spread of Blight to the tubers. Field experience suggests that while a destructive spray alone will reduce the amount of Blight on the tubers to something like 5 per cent, a combination of protective and destructive sprays should reduce it to less than 1 per cent. The economics of a double spray still require investigation, and it is planned to do this in the years to come, in co-operation with the Economics Department and the County Organisers.

Protective sprays are much more effective if applied just *before* an attack of Blight takes place, and much work has been done to arrange a valid system of forecasts for the first appearance in each year. Beaumont (1947) originally suggested a simple temperature-humidity rule. When the relative humidity does not fall below 75 per cent, nor the temperature below 50° F. for 48 hours together, an attack of Blight may be expected within two to three weeks. Records from this Department's disease phenology plots have shown that the outbreak of Blight is indeed preceded by a suitable climatic period, but there may be earlier favourable periods which are not followed by the disease (Fig. 2). All the valid periods since 1944

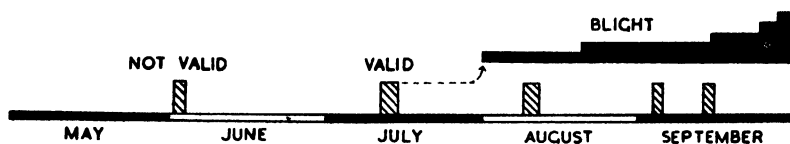


Fig. 2.—Forecasting Potato Blight; data for Auchincruive, 1944. Periods of suitable climate for the development of the disease are shown by the cross-hatched columns above the time scale. The first suitable period, at the beginning of June, occurred fifty-six days before the first appearance of Blight. It is therefore not valid for a forecast. The valid period occurred on 11th-14th July—nineteen days before Blight appeared.

have, however, occurred with a little latitude after the first of July, which is suggested as a "zero time" for the validity of forecasts. With this proviso, it would have been possible to issue correct prophecies in all five years. The stage is now set for an organised system of forecasting, and it is possible that this will be accomplished this year. Protective sprays can thus be timed with greater accuracy, and the forecasts would also be useful in the special case of destructive sprays applied to early Epicure crops grown for seed. Blight generally appears about the time these are

THE TITLE OF PLANT DISEASE.

being lifted, and destruction of the foliage *before* the fungus attacks will save very considerable loss in storage.

It will now be seen that the 10 or 15 per cent average loss from Blight can be reduced to somewhere around 1 per cent through a wider use of present methods. Cheaper destructive sprays have been investigated, while greater precision and certainty will be given to the use of protective sprays by means of forecasts. Economics of the dual protective and destructive spray still require investigation.

Club-root or Finger-and-toe of Turnips and Swedes.—One of our first investigations with this disease was to recognise a new difficulty—its seed-borne nature. Of thirty-six samples of turnip and swede seed examined in 1946 nine were found to carry the disease. The most heavily infected sample had 5.5 per cent of infected seeds. It seems likely that infected seed can initiate the disease under field conditions. The original advisory case which prompted the investigation involved a large field of cabbage, sown broadcast for raising transplants. Club-root appeared in small isolated patches on this land which was formerly clear of the disease. The seed-borne phase does not appear to be controlled by dry organic mercurial dusts, and the only practical control so far applied is the testing of samples for seedsmen.

Club-root is also a soil-borne disease, with its consequent difficulty of eradication. The top 9 inches of soil on an acre of ground weigh 1000 tons, and the adequate fungicidal treatment of this amount provides a major challenge to plant pathologists. The principles underlying a solution of this problem are being investigated, though at present with particular reference to Potato Root Eelworm rather than Club-root. A useful measure of control of transplants can be effected with mercuric chloride (1 in 2000), but there is at present no workable method of destroying soil infection with Club-root for crops which are not transplanted.

There are, however, varieties of turnip which are resistant to Club-root. Bruce and Wallace are highly resistant, Aberdeen less so, and Wilhelmsburger (a swede) least resistant, in our experience. Club-root brings an average annual loss of at least 15 per cent of a crop of high value; why are the resistant varieties not grown more widely in the west? One answer is that Bruce and Wallace have 20 per cent less dry matter than the common susceptible varieties of swede. Another is that Bruce and Wallace are reputed to be generally rather low in yield. Yet on heavily infected land it is usual to find that the resistant varieties give a satisfactory crop, whereas a susceptible variety provides very little useful produce. It is therefore a practical necessity to decide when it is profitable to grow the resistant varieties. Table I. shows that this would be the case when there is more than 25 per cent of disease on the susceptible varieties. A simple method of estimating the percentage of disease has been developed at this Department. It is closely related to yield, and could be applied as part of the advisory service by County Organisers (Grainger, 1949).

TABLE I.—CLUB-ROOT AND YIELD OF RESISTANT AND SUSCEPTIBLE VARIETIES OF TURNIP AND SWEDE.

SUMMARY OF RESULTS, AUCHINCRAIVE, 1948.

	DISEASED CONDITION				HEALTHY CONDITION.
	Average percentage of disease (1)	Actual wt per row (lb.) (2)	Relative amounts of dry matter (3)	Actual wt. corrected for dry matter (lb.) (4)	Calculated wt. of 150 healthy plants (lb.) corrected for dry matter (5)
Bruce and Wallace	3.7	160½	80	128 ¹	141 ²
Aberdeen	18.5	138	85	117½	113
Wilhelmsburger	26.0	124	100	124	181
Susceptible varieties of swede ³	47.7	98½	100	98½ ¹	190½ ²

¹ 128 is 130 per cent of 98½—i.e., the comparable dry-matter yield of Bruce and Wallace is 30 per cent more than that of susceptible varieties of swede on heavily infected land.

² 141 is 74 per cent of 190½—i.e., the comparable dry-matter yield of Bruce and Wallace is 26 per cent less than that of susceptible varieties of swede under healthy conditions.

³ Figures are the averages of the following varieties—Best of All (2 strains), Locarno, St Marnock, and Tipperary.

A little explanation of Table I. is desirable. Columns 1, 2 and 4 summarise the behaviour of resistant and susceptible turnips and swedes when grown in heavily infected land at Auchincraive. When the yields per row are corrected (column 4) for the varying amounts of dry matter mentioned above (and in column 3), Bruce and Wallace yield 30 per cent more than the susceptible swedes. Comparable yields upon the same land under healthy conditions cannot be estimated experimentally, since the disease cannot be eradicated from the soil. A measure of possible behaviour on the same soil, if it were healthy, can, however, be obtained if the average weight of roots unaffected, or but very slightly affected by the disease, is multiplied by the standard number of plants (150) in our 38-yard rows. Results of this calculation, corrected for dry matter, are given in column 5, and show that Bruce and Wallace can be expected to yield 26 per cent less than susceptible swedes in healthy soil.

Club-root is more severe in some years than in others, but even in the "light" year 1948 some 18 per cent of crops covered by a large-scale survey in Ayrshire had more than 25 per cent of the disease. The use of Bruce and Wallace would have increased the yield, on a dry-matter basis, of these crops.

The use of quicklime, so often mentioned in the past as a "cure" for Club-root, does not provide an adequate control of the disease. It is, nevertheless, true that the application of quicklime and the avoidance of undecayed organic matter, tend to mitigate its severity in some degree on most soils.

Parallel with this work on pathology, a determined attempt is being made by the Scottish Society for Research in Plant-Breeding to obtain varieties of swede resistant to Club-root. The problem is to combine resistance to the disease with high dry-matter content, and this could eventually lead to an almost complete control.

Dry Rot of Turnips and Swedes.—This disease, caused by the fungus *Phoma lingam*, is also relatively severe in West Scotland. Its distribution could be very greatly curtailed if seed were treated with dry mercurial dusts. Our experiments show that this treatment somewhat reduces the germination, though not to a serious degree, even if carried out some months before sowing.

DISEASES WHICH CAUSE MODERATE LOSS.

Acid Damage to Oats and other Cereals.—Oats are usually regarded as a crop which will flourish even on soil of considerable acidity. We have, nevertheless, during the last five years, had a steady stream of advisory cases in spring and early summer, where no trouble but that due to soil acidity can be found. Tips of the leaves are yellow or brown and the crop has a patchy appearance. Good parts of normal green alternate in the crop with yellower areas. Soil from the former is less acid than the latter, and this constitutes a reliable diagnosis. It is not possible to ascribe a limit of relative acidity (pH) below which acid damage of oats will occur on all soils. This problem is not strictly pathological, but the plants appear diseased and so naturally gravitate to this Department. Such cases are dealt with in collaboration with the Soils Laboratory of this College, and material for diagnosis should include both seedlings and soil from good and bad parts.

The remedy is simple, swift, and sure—apply ground limestone as soon as the condition is recognised in spring. Fig. 3 shows a very satisfactory crop of oats grown from a failing braird by the prompt application of ground limestone. This kind of lime is really the quickest-acting form, for though chemically inert, it is so finely ground that the particles can be quickly made available in the soil.

Fig. 4 shows the results of a large-scale survey of nutritional disorders of oats, made in 1948 with the valued help of Mr Iain D. L. Scott. It was necessary, on this scale, to include manganese deficiency, nitrogen deficiency and other causes of yellowing. Determinations on small areas, however, suggest that at least three-quarters of the amount given are due to acid damage. These survey results should not be interpreted too exactly. Soil conditions vary so greatly within even a relatively small area that the samples shown are not necessarily representative of the whole county. Some 5600 acres out of 310,000 acres under oats in the



Fig. 3. *A satisfactory crop of oats raised from a failing braird by timely application of ground limestone.*

west have, however, been reviewed. One feature, shown well by Fig. 4, is the relatively high amount of acid damage in the neighbourhood of Glasgow. This urban increase in acidity is in line with earlier investigations by the writer in Yorkshire (Grainger, 1942).

Fig. 4 is perhaps rather spectacular, but it is reassuring to know that the over-all loss in production from nutritional disorders of the oat crop is no more than 4.4 per cent. The cold light of statistics is not, however, very comforting to the individual farmer who has severe acid damage. Investigations of an oat field at Barassie, Ayrshire, where about one-third of the crop had severe acid damage (soil of pH 5.0), one-third moderate damage (pH 5.7), and the rest no damage (pH 6.0) showed that the yield was diminished from a possible 31½ cwt. of grain per acre to an actual return of 25 cwt. This is a reduction of about 19 per cent, and there was also a loss of about 25 per cent in the yield of straw. Such an incubus on production is well worth the simple control mentioned above. Acid damage reduces the yield, but does not affect the percentage of the major nutrient constituents—protein, carbohydrate, and ash—nor does it reduce the average weight of 1000 grains.

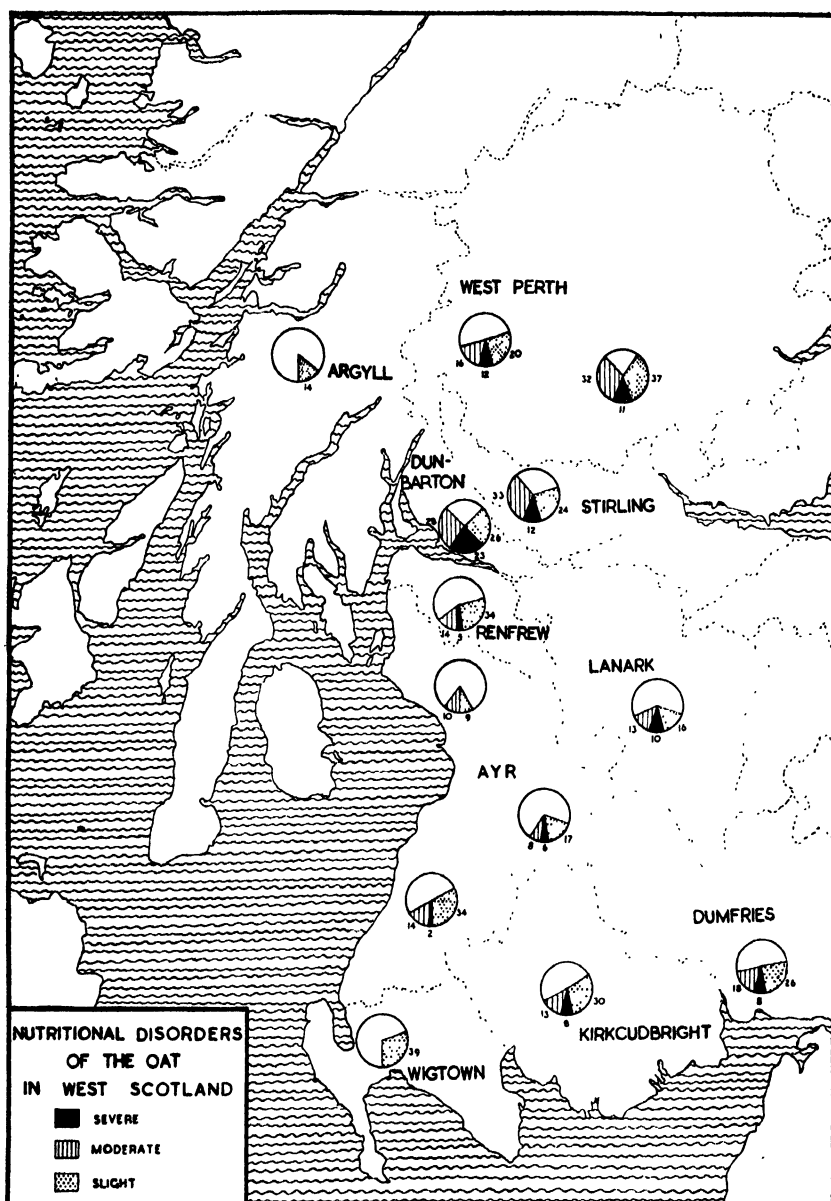


Fig. 4.—The results of a large-scale survey of nutritional disorders of the oat, summer 1948. The samples from Argyll and Wigtown were confined to areas where the geology is responsible for less acid soils than the rest of the County. Figures opposite each sector give the percentage of acres falling within each category. (The writer gladly acknowledges the help of Mr Iain D. L. Scott in this survey.)

Wheat and barley are also subject to acid damage, which can be controlled by the timeous addition of ground limestone as for oats. Lime should, however, be applied to cereal crops only if acid damage has been diagnosed. Manganese deficiency also causes yellow or brown spots on the leaves (the so-called "Grey speck"), but the addition of lime would only aggravate this condition.

Foot-rots of Cereals.—Dr H. F. Dovaston, Mycologist in this Department, has investigated brairding losses of oats due to several species of *Fusarium*. Four species of this fungal genus are mainly encountered, and together produce damage over quite a variety of soil conditions. In practice, however, the results again indict the acid soils, particularly the wet ones. The fungi can infect the soil, but are also seed-borne. Treatment of seed grain with dry mercurial dressings, however, controls this phase of the trouble, and provides an additional plea for this most economical of disease control measures.

Foot-rots can be locally quite severe, but their major distribution in Western Scotland has not yet been established.

Take-All or Whiteheads of Cereals.—This is a disease of the rotation rather than the crop. It is rarely severe when cereal crops do not follow each other, and can be serious when they do. Wheat is mainly affected in our experience, though a few cases on oats have been recorded. In one case investigated, the yield of grain was reduced by 68 per cent in the affected parts and by more than 30 per cent over the whole field. Germination was reduced by 20 per cent, and percentages of nitrogen (protein) and ash in the diseased grain may be lower than in the healthy sample. Only about half the grain from diseased areas was suitable for milling when compared with grain from unaffected plants.* Take-all is indeed a serious disease, and it is well worth the "trouble" of proper rotation to avoid it or keep it to low proportions. The fungus *Ophiobolus graminis*, which causes Take-all, appears to require straw or grass stems for its nutrition, and the quicker the stubble can be ploughed up and rotted down in the autumn, the quicker will the fungus diminish in the soil.

Tulip-root of Oats.—This is indeed a serious disease (Fig. 5), but fortunately it is rare at present. We have had six cases during the last five years. The cause is an eelworm, *Anguillulina dipsaci*, and when a whole field is seriously affected the results are staggering—e.g., a grain loss of 84 per cent and straw reduced by 77 per cent. As in acid damage, the yield is reduced without any variation of nutrient content. Manganese deficiency is often associated with the disease, but a series of tests showed that, as would be expected, correction of the deficiency did not diminish the severity of Tulip-root, though better growth resulted from the addition of manganese sulphate. The disease can be seed-borne, though the cases we have examined do not seem to have originated from this source. They appear to be recrudescences of older infections dating from before

* The writer thanks Dr James Sword for this information about the milling quality.

the days of Plant Pathology Departments. The infection on one farm had apparently come from another infected field on the same farm, but at a considerable distance.

No cure for the disease is yet known, though in the late autumn of 1948 treatment with dichloropropane-dichloropropylene (D.D.)

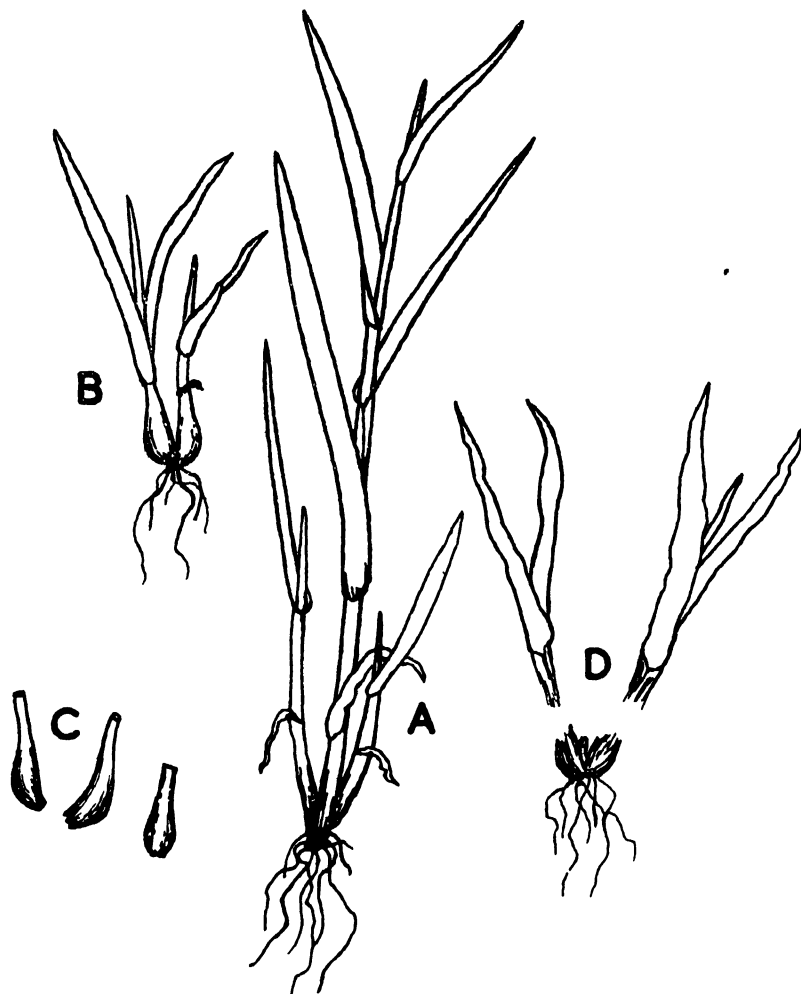


Fig 5—(A) Healthy young oat plant (B) A plant of the same age affected with Tulip-root (C) Separate stem bases somewhat reminiscent of tulip bulbs (D) The lower parts of affected plants frequently rot near soil level

was given to a heavily infected area to see if this substance would eradicate the trouble.

Potato Root Eelworm.—There are about 3000 acres devoted to the growth of early potatoes in the coastal belt of Ayrshire. About

2500 acres are heavily infected with Potato Root Eelworm (*Heterodera rostochiensis*). This causes a probable loss of about 40 per cent in yield, and the loss would undoubtedly be greater if the crop were not lifted so early. This disease is, in fact, only included in this section because the heavily infected area is small in comparison with the total acreage under potatoes. A few years ago the problem was to find a substance toxic to Potato Root Eelworm cysts. The late Dr O'Brien, my predecessor in this Department, with his colleagues (1939), found that calcium chloracetate effected a useful degree of control, though its use was quite uneconomic. We have ourselves found that a particular tar acid fraction will control the trouble, and trials of this substance and of D.D. (a mixture of dichloropropane and dichloropropylene) are in progress. Both substances reduce the severity of Eelworm by about 50 per cent, increase the yield by about 20 per cent, and may be on the verge of providing economic treatments. Much will depend on the duration of effect of the treatment—that is, what will be its effect in the second season after application? The value of long-term experiments in Plant Pathology becomes more obvious each year, and much useful information should be gained during the coming summer of 1949.

Eelworm is established on about 1 per cent of the crops of late potatoes in Stirling and Perth, and also in Dumfries and Kirkcudbright. It is probably at a higher level in Lanarkshire. This is a serious threat to the seed potato industry, for the infection will undoubtedly spread unless measures are adopted to check it. Until an economic cure is forthcoming, it is best for a grower to avoid planting potatoes on affected ground. The presence of cysts of the Potato Eelworm can be determined in representative samples of soil, and it is now part of our advisory service in the West to examine such samples. Land should not be used for growing potatoes if *any* cysts containing larvæ are found in a sample. Such ground would best be laid down to grass for as long a time as possible, wherever this can be made to fit the farming practice. The next best policy is to grow arable crops other than potatoes for as long as possible. This light infection in the maincrop districts should be taken seriously, as it constitutes a real menace to the continuance of Scotland's seed potato industry.

Cysts can be spread from field to field upon the boots of workers and on tools or implements. One pair of Wellington boots carried eleven cysts from heavily infected ground in dry weather. We ourselves always perform the unseen service of washing our boots, and any stakes or tools, after a visit to affected land.

It is not possible to assign a period of years for "starving" the Eelworm in the absence of its host. Our advisory records include well-authenticated cases where infections are still active after eleven to fifteen years under grass, but they also include one instance where a substantial infection on light land disappeared after three years under grass. The magnitude of cyst infection in the soil appears

to bear no relation to the relative acidity (pH), the lime requirement, organic matter content, phosphate, potash, or total soluble mineral matter.

DISEASES OF LITTLE ECONOMIC SIGNIFICANCE.

A series of disease phenology plots was established at Auchincruive in 1944. Varieties of oats, barley, wheat, linseed, ryegrass, beans, roots, and potatoes are grown in replicated plots round a meteorological station. The amount of disease, yield, and other factors are noted each year. It is therefore possible to reach certain general conclusions which can be tested against the advisory experience. Some of the common diseases are shown to have but little economic effect.

Cereal Rusts.—Barley Rust (*Puccinia anomala*), Oat Rust (*Puccinia coronata*), Black Stem Rust of wheat (*Puccinia graminis*), Brown Rust of wheat (*Puccinia triticina*), and Loose Smut of wheat (*Ustilago tritici*) have all appeared in most of the last five years, but may be dismissed as having no practical significance.

Yellow Rust of wheat is in a different category, but only in 1946 did it cause measurable loss of grain yield (8 per cent) on the varieties Wilma, Double Standup, and White Victor. The varieties Squareheads Master, Yeoman, Redman, Kolben II., Diamond II., Aile, Red Marvel, and Scottish Iron have had only very small infections during the last five years. Severe damage was, however, recorded in 1943 before these plots were established, and losses of grain up to 25 per cent were then recorded (e.g. Dennis, 1944).

Other Cereal Diseases.—Net Blotch of barley, caused by the fungus *Helminthosporium teres*, has not exceeded an average of 2 per cent of the leaf area during the last four years.

Secondary Leaf-stripe of oats (*Helminthosporium avenae*) was most severe in 1946, with about 12 per cent of the leaf area damaged by the fungus. There is no correlation with yield, however, and no correlation with the amount of seedling blight in the following year. The latter is the serious phase, and can be controlled by dressing the seed with dry mercurial dressings.

Mildew of cereals has not been severe enough to affect the yield of grain at Auchincruive, though advisory experience shows that it may reduce the value of cereals cut for green fodder. Earlier work in this Department suggested that the correction of any deficiency of phosphorus in the soil, and the avoidance of excess nitrogen, potash, and heavy manuring in general, would keep the disease to low proportions (Grainger, 1947; MacFarlane and Grainger, 1947).

Chocolate Spot and other Diseases of Beans.—It may be somewhat surprising that Chocolate Spot (*Botrytis cinerea* and *B. fabae*) is included in the diseases which cause little damage. The disease covered 90 per cent of the foliage towards the end of the season at Auchincruive in 1944, but the yield of beans was still above the average (Table II.). The reason for this is probably that the disease

TABLE II.—YIELD OF BEANS AND CHOCOLATE SPOT, 1944-48.

Variety.	B 01.		B 02.		B 03.		Carse.		Tick.		Kilbride.		Average all varieties.	
	Grain lb. per plot.	C.S. %.	Grain lb. per plot.	C.S. %.	Grain lb. per plot.	C.S. %.	Grain lb. per plot.	C.S. %.	Grain lb. per plot.	C.S. %.	Grain lb. per plot.	C.S. %.	Grain lb. per plot.	C.S. %.
1944	11.7	90.0	11.5	90.0	11.5	90.0	9.4	90.0	11.3	90.0	8.9	90.0	10.7	90.0
1945	9.8	13.2	10.6	15.1	10.6	3.3	8.9	13.0	..	..	6.3	6.7	9.2	10.3
1946	8.9	11.3	17.0	3.8	11.1	4.5	9.3	10.0	15.1	5.0	12.3	3.3	12.3	6.3
1947	4.3	6.5	12.3	1.4	10.4	1.5	4.3	5.8	12.8	2.4	11.6	3.3	9.3	3.5
1948	4.9	15.3	11.2	7.3	10.3	8.3	5.7	12.0	13.4	6.3	12.1	8.8	9.6	8.5
Average	7.9	11.6 ¹	12.5	6.9 ¹	10.8	4.4 ¹	7.5	10.2 ¹	13.2	4.4 ¹	10.2	5.5 ¹	10.2	23.7

¹ Calculated on the four-year average, 1945-1948, in order to show slight varietal difference when the amounts of disease are low.

Figures for yield and for the amount of Chocolate Spot (C.S.) are the averages of four replications except in 1944 and 1945. Each plot is approximately 1.243 acre.

The amounts of Chocolate Spot (C.S.) are those recorded at the end of the growing season.

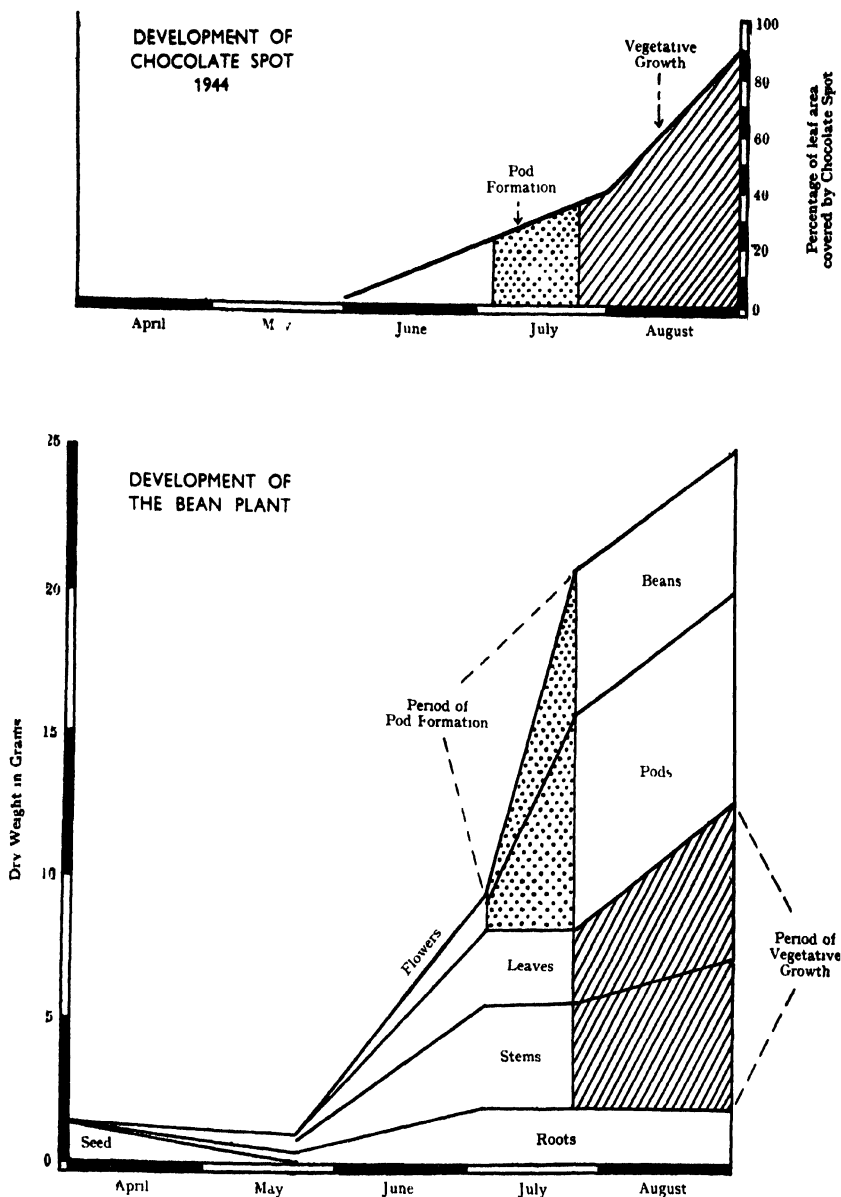


Fig 6—Development of the bean plant (below) compared with the development of Chocolate Spot (above) The year 1944 was a year of heavy infection, but amounts of the disease were relatively low at the time of pod formation. More serious attacks in August occurred at the time when only vegetative growth was being made.

was still rather light at the time the bean seeds were fully formed (Fig. 6). Beans make considerable vegetative growth after they have made their seeds, and this rather useless leafy growth provides the medium for spectacular attack by the fungus. It might even be said that where beans have failed, and there has been plenty of disease present, the trouble could be investigated more profitably through physiological than pathological studies. One probable cause of failure is potassium deficiency, which increases the severity of Chocolate Spot symptoms, but itself brings very poor growth. Bean Leaf-spot, caused by the fungus *Ascochyta fabae*, is similar in general effect to Chocolate Spot, but its attacks have been relatively slight at Auchincruive during the last five years. Bean Rust (*Uromyces fabae*) generally appears too late to cause harm.

CROPS WITH LITTLE DISEASE.

Are there crops which are free from disease troubles? Marrow-stem kale figures very lightly in our advisory files, and then only for frost damage. It is also fortunate that grassland is relatively free from diseases, for there are over a million acres of it in the West. Blind seed fungus occasionally brings considerable loss on crops of ryegrass grown for seed, and ergot has apparently caused abortions in one case where infected hay had been fed to stock. My colleague Dr Dovaston described a new species of *Pyrenophora* (*P. lolii*) on ryegrass (Dovaston, 1948). Apart from these relatively small infections, however, the vast bulk of pasture and meadow grassland is not diminished in yield by disease. Clover is also relatively free from disease; there is no "clover sickness" at all comparable with infections in the South of England.

PLANT DISEASE AND THE WEATHER.

The West of Scotland has a climate slightly more humid and with more rainy days per annum (Figs. 7 and 8) than the central or eastern parts of Great Britain. Differences in average relative humidity between areas are not large, but they are averages of all stations with published records in each area for seven years, and the difference between average relative humidities for the West of Scotland (83 per cent) and the Midlands of England (78 per cent) is, for instance, mathematically highly significant. Average temperatures of West Scotland are 2.3° F. lower than the South of England when averaged over the whole year. Does the climate of our area, as indexed by these averages, bring about peculiarities of distribution of plant disease?

A combination of the results from our disease phenology plots, with meteorological records from the same area, leads towards the view that the severity of most disease is linked with climate, but

THE TITHE OF PLANT DISEASE.

MEAN RELATIVE HUMIDITY 1938-1944

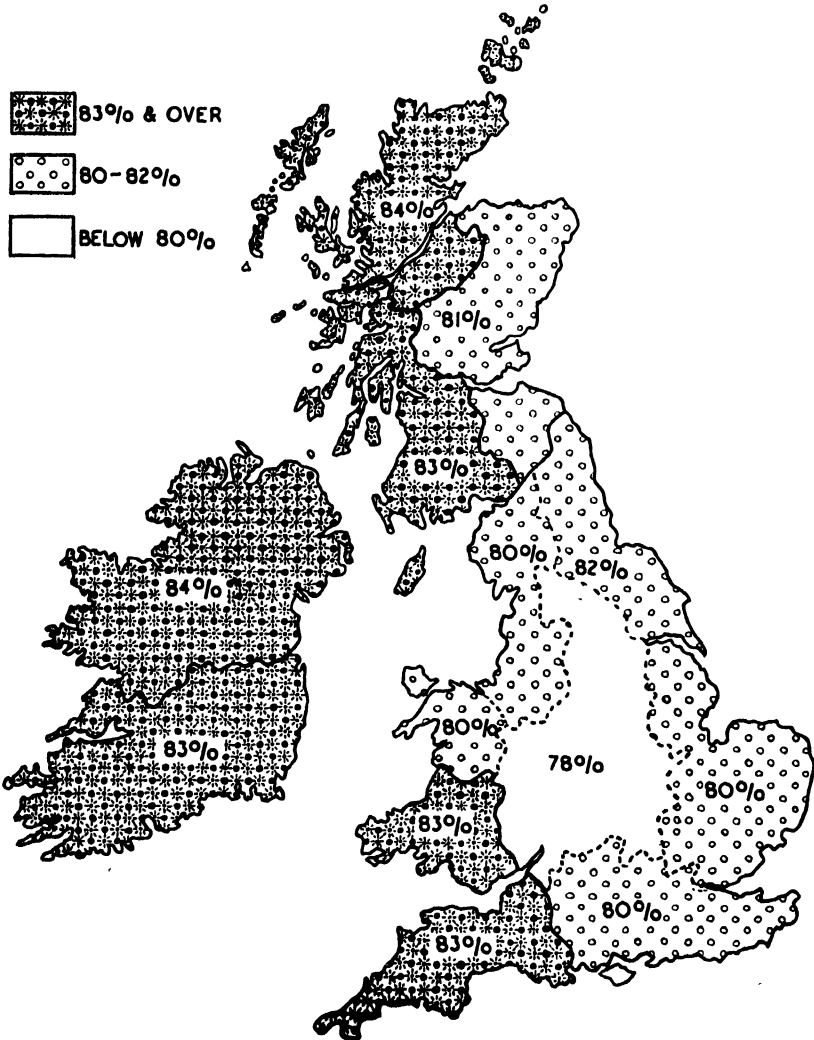


Fig. 7.—Average percentage relative humidity in the British Isles ; data compiled from the Air Ministry's Monthly Weather Report. The average for Southern Ireland is for 1938 and 1939 only. Data for Northern Ireland are for northern counties after 1939.

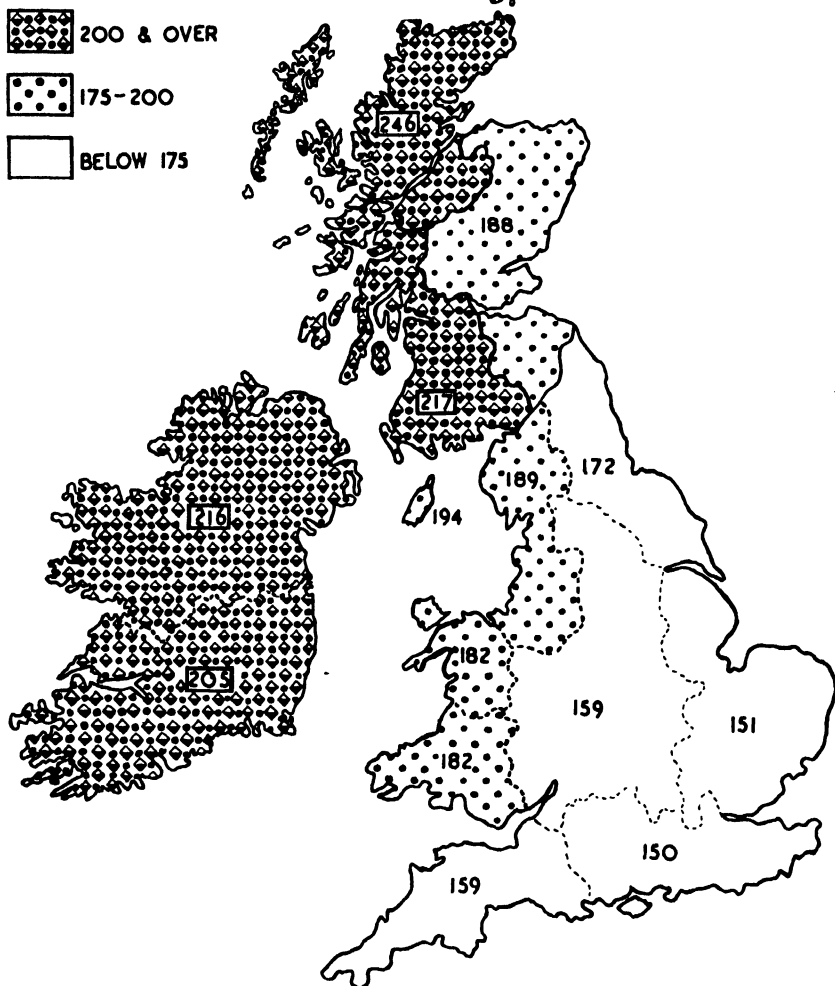
AVERAGE NUMBER OF RAIN DAYS PER ANNUM1938-1944

Fig. 8.—Average number of rain days per annum in the British Isles ; data compiled from the Air Ministry's Monthly Weather Report. The average for Southern Ireland is for 1938 and 1939 only. Data for Northern Ireland are for the northern counties after 1939.

in a rather specialised manner. This is well typified by Fig. 9, which deals with the weather relations of Chocolate Spot of beans. This disease is severe in proportion to the number of hours per week when the atmosphere is saturated with water vapour (100 per cent relative humidity). Bean Leaf-spot (*Ascochyta fabae*) and Mildew (*Erysiphe graminis*) of cereals have similar relations. Temperature seems to play but a minor rôle, in comparison with the relative prevalence of saturated air, in affecting the severity of these

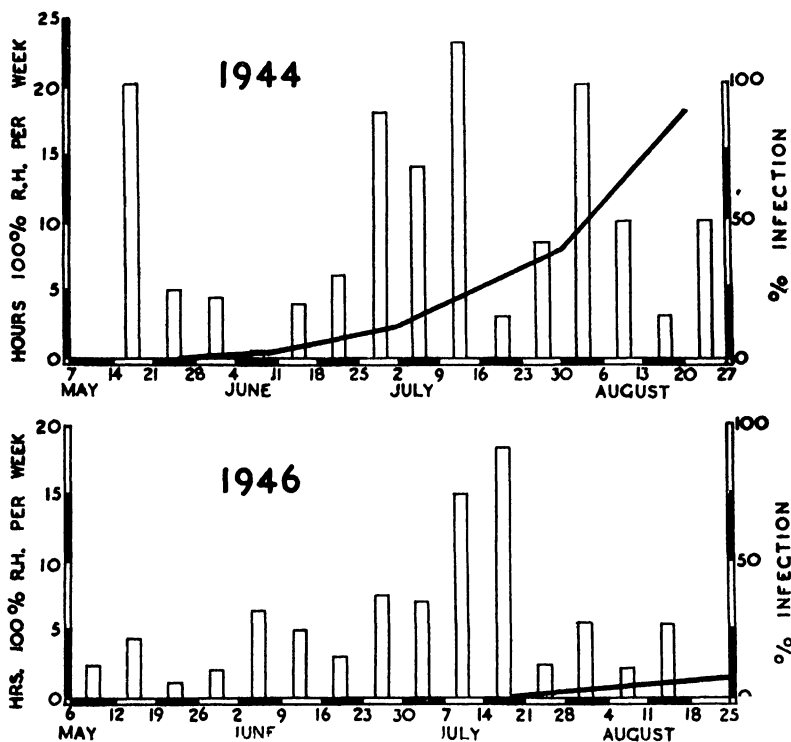


Fig. 9.—Typical relations between the amount of Chocolate Spot of beans and the number of hours 100 per cent relative humidity per week. Vertical columns represent the latter (refer to left-hand vertical scale); the full black line shows the development of the disease (refer to right-hand vertical scale). The years 1945, 1947, and 1948 are similar to 1946.

diseases. The specialised climatic relations of Potato Blight and their use in forecasting this disease have been mentioned above. Attempts have been made to explain the occasional severe epidemics of Yellow Rust of wheat, but as yet without much success. Years with considerable Rust on the susceptible varieties Wilma, Double Stand-up, and White Victor have, however, since 1945, all had a relatively dry period (below an average of 65 per cent relative humidity) in May, and the year 1947, with no Yellow Rust, had no dry period. This seems to show that the disease is stimulated by

dry conditions in spring, but the idea does not fit well into other known features of the fungus. It is therefore here advanced but tentatively.

The general climate of the area is therefore likely to accentuate particular disease problems, but only through the greater likelihood of occurrence of particular meteorological factors which it might confer. No one can, fortunately, control the weather, so why study disease in relation to the climate? Such investigations are, however, very necessary in making proper interpretation of experimental field results, may be of direct practical use as in forecasting Blight, and add greatly to the advisory background. Many farmers ask questions of interest in addition to those of utility.

An important proviso should be mentioned in connection with climatic relations. It is that the disease-producing agent must be present. Spores of the Mildew fungus (*Erysiphe graminis*), for instance, appear to be present in the air throughout most of the year. They can therefore cause disease whenever the climatic conditions are suitable. Potato Blight, on the other hand, arises from air-borne spores which probably are not produced from their over-wintering habitat until the beginning of July. This is a probable reason for the necessity of "zero time" in forecasting the appearance of this disease, as mentioned above. Spores of the fungus *Helminthosporium avenae*, causing Leaf Stripe of oats, do not appear until the end of June or early July, when they produce the so-called "secondary" infection. The source of those spores is not known, but its discovery might have important implications in control. Such spore studies are examples of investigations which begin with the abstrusely scientific, but may finish with really practical application.

Another important weather factor is the amount of sun. This is usually expressed as the duration of bright sunshine per day, but this affects the popularity of a holiday resort far more than it does the growth of plants. The length of day, on the other hand, often exerts a major degree of control over plant growth, in particular relation to flowering. Days are noticeably longer in summer in Scotland than in Southern England, and are shorter in winter. Does this factor of day length exert any influence on the severity of disease, either directly or through the type of growth of its host plant? This question had been investigated by comparing plants subjected to the rather drastic reduction of an 8-hour day, with those exposed to normal duration of daily light. Plants shown on the bogie to the left of Fig. 10 were wheeled out from a well-ventilated dark shed at 9 A.M. and were replaced there at 5 P.M. Similar plants (on the right, Fig. 10) remained out-of-doors continuously. Beans were much smaller in the 8-hour day series, were later in growth, but flowered normally, and had the same infection with Chocolate Spot and Bean Leaf-spot as had the normal-day series. Potatoes grown under similar conditions showed little difference in size between the two treatments, and both lots had the same amounts of Blight. Only with Mildew of wheat did the short-day plants develop appreciably more disease than the normal-day

series, and Scottish readers will be relieved to note that it was the long-day plants which remained healthy.

VIRUS DISEASES OF POTATOES.

It is true that virus diseases diminish the yield of potatoes in Lowland districts, but it might be doubted if they represent a loss to Scotland. Should readers suspect facetiousness, it might be stated that the annual value of seed potatoes exported from Scotland is at least £4,000,000. The problem of disease loss is complicated in this section and the outlook is rather a concern for the health and quality of the seed potatoes exported. The work of Sir James Denby Roberts in raising stocks tested free from virus X should be mentioned in this connection, and the Scottish Society for Research in Plant-Breeding at Corstorphine is also working on the problem of healthy stocks. Our own advisory work has brought us experience of one outbreak of the serious virus Y in one very small area, but with the collaboration of the grower this was quickly eliminated, for the virus is rare in Scotland.

It is important, in dealing with the control of disease, to preserve a proper sense of proportion. This paper first considered the really serious diseases, and proceeded to the less serious ones. Readers should, therefore, be well prepared for the statement that there are indeed diseases which enhance the value of their hosts. At the present time, an infectious virus chlorosis of *Abutilon* is responsible for the very decorative variegation of the form known to gardeners as *Abutilon thompsonii*. The "healthy" *A. striatum* rarely graces the festive town hall or the flower show. Seventeenth-century tulip growers gave fabulous prices for "broken" tulips, which we now know to be healthy plants infected with a virus. Let us, however, return to field and laboratory, for, even with the full dissemination of the best knowledge, the tithe of disease can, as yet, only be reduced to a little less than half.

REFERENCES.

This paper is a review of the work of the Department of Plant Pathology of the West of Scotland Agricultural College. References given below are therefore mainly to publications of that Department. Limited numbers of reprints of several papers (marked *) are available, and copies may be obtained from the author until the stock is exhausted.

- Beaumont, A., 1947. The dependence on the weather of the dates of outbreak of Potato Blight epidemics. *Trans. Brit. Mycol. Soc.* 31 : 1 and 2, pp. 45-53.
- Dennis, R. W. G., 1944. Cereal Diseases in Scotland. *Ann. appl. Biol.* 31 : 4, pp. 370-374.
- *Dovaston, H. F., 1948. A new species of *Pyrenophora* from Italian Rye-grass. *Trans. Brit. Mycol. Soc.* 31 : 3 and 4, pp. 249-253.
- Grainger, J., 1942. Huddersfield Soils. Handbook No. 11 of the Tolson Memorial Museum, Ravensknowle, Huddersfield, Yorks.

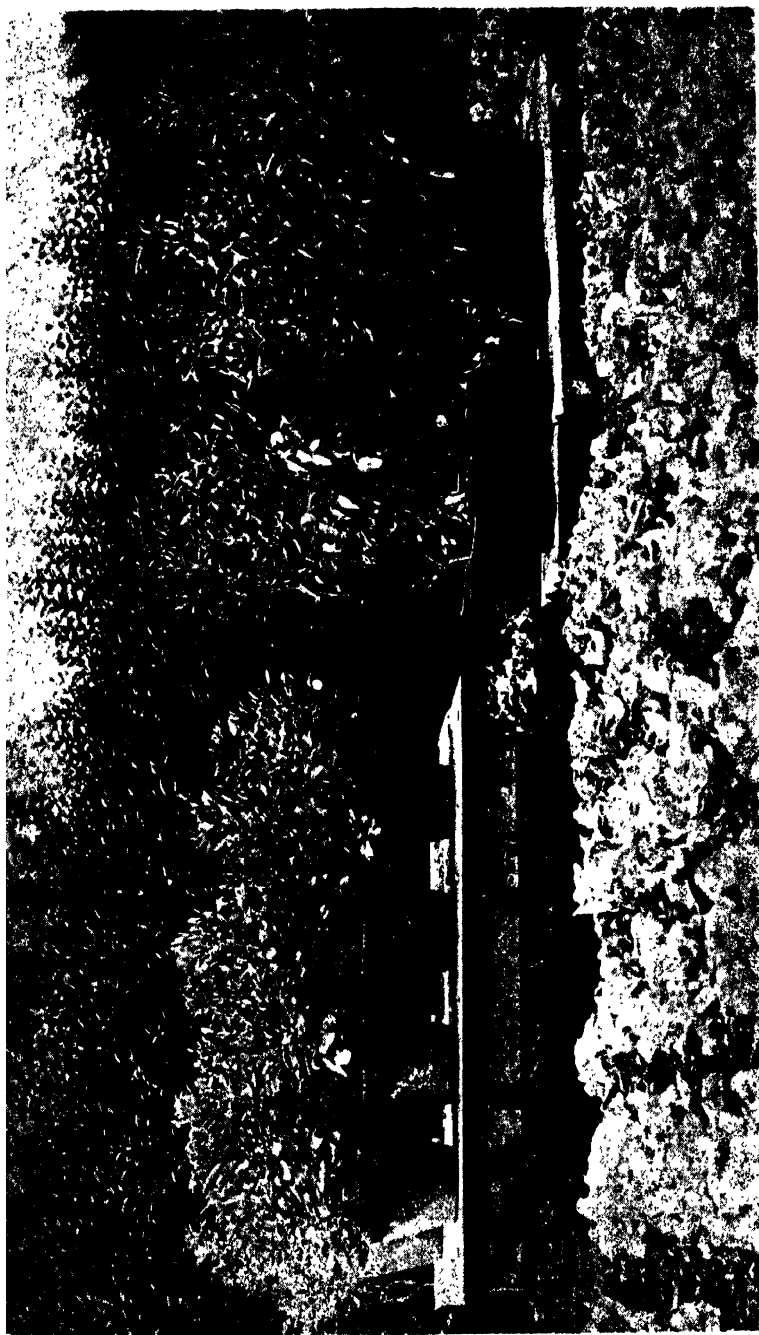


Fig. 10.—Growth of field beans under normal length of day (right) and with only 8 hours of light daily (left). The latter (on the bogie) are run into a well-ventilated dark shed at 5 p.m. and brought out at 9 a.m. the next morning. Plants in both treatments had approximately the same amounts of Chocolate Spot and Bean Leaf-spot. Wheat plants grown under these conditions tended to have more Mildew on the short-day plants.

[Photograph by Dr H. F. Dovaston.]

- *Grainger, J., 1946. Seed-borne Club-root. W. Scot. Agr. Coll. Ext. Staff Circ. No. 1.
- *Grainger, J., 1947. The Ecology of *Erysiphe graminis* D. C. Trans. Brit. Mycol. Soc. 31 : 1 and 2, pp. 54-65.
- *Grainger, J., 1947. Acid soil injury on cereals. W. Scot. Agr. Coll. Ext. Staff Circ. No. 8.
- *Grainger, J., 1948. D.D. as a control of Potato Root Eelworm. W. Scot. Agr. Coll. Ext. Staff Circ. No. 10.
- *Grainger, J., 1949. Diseases of the Field Bean. W. Scot. Agr. Coll. Ext. Staff Circ. No. 13.
- *Grainger, J., 1949. Club-root of Turnips and Swedes and the resistant varieties. W. Scot. Agr. Coll. Ext. Staff Circ. No. 14.
- *Macfarlan, J., and Grainger, J., 1947. Corn Mildew on Oats. Scot. Agr. 26 : 4.
- *Main, A. D. C., and Grainger, J., 1947. Potato haulm-burning with Sodium Chlorate. Scot. Agr. 27 : 1.
- O'Brien, D. G., Gemmell, A. R., Prentice, I. W., and Wylie, S. M., 1939. Field Experiments in Ayrshire on control of *Heterodera schachtii* by the use of chloroacetates. Jour. Helminthology 17 : 1, pp. 41-50.

AGRICULTURAL RESEARCH IN SCOTLAND IN 1948.

BEING A BRIEF SUMMARY OF THE WORK AT THE
SCOTTISH AGRICULTURAL RESEARCH STATIONS
AND AGRICULTURAL AND VETERINARY COLLEGES
DURING THE YEAR.

*Readers desiring fuller information on any of the subjects mentioned
should write to the Director of the Station or Principal of the
College at which the investigation is being carried out.*

INSTITUTE OF ANIMAL GENETICS.

UNIVERSITY OF EDINBURGH, WEST MAINS ROAD.

DEPARTMENT OF ANIMAL GENETICS.

AT the research farm of Shothed, with which is associated the Cockburn herd of Ayrshire cattle, work continues into the inheritance of milk yield in dairy cattle. For three years the milking cows have been kept under optimum or "best possible" conditions, which includes thrice milking and feeding of concentrates at sometimes over 4 lb. to the gallon. With certain lines of breeding the response to the improved management was, on 305-day lactation yields, an increase from 760 gallons to 940 gallons, just about 25 per cent. The cows of one particular line gave virtually no response, their yields remaining at about 680 gallons. Only by adopting this "optimum" management was it possible to discriminate with certainty between the groups of cows. As the groups were sired by different bulls a much more reliable "progeny test" was obtained.

Amongst the cows which responded well to optimum management were some Ayrshire/Shorthorn crosses, with one grandparent a beef Shorthorn of a 250-gallon strain. The magnitude of the improvement suggests that while many genes must affect milking capacity there are some genes which have a major effect.

Considerable work has been done on crosses of various breeds with the Ayrshire. No indication has been obtained of any hybrid

vigour (heterosis) as measured by increased yield of milk or fat. The best commercial cross seems to be the Ayrshire/Shorthorn, which gives a good dual purpose type. The Ayrshire/Jersey crosses have proved attractive animals, but the butter-fat content has not shown any noticeable improvement on the Ayrshire. The back-cross to the Jersey is now being made, when it is hoped that the three-quarter Jersey will recapture the butter-fat percentage of the island breed and retain the improved udders and the milk yield of the Ayrshire. Other crosses with other breeds have not given such useful animals, but this is possibly due to having mated the Ayrshires to bulls which are not typical of their breeds.

The inbreeding work with Ayrshires is proceeding with satisfactory results. From the mating of the dam back to her own sire several calves have been born, but so far no heifers have calved down.

ANIMAL BREEDING AND GENETICS RESEARCH ORGANISATION.

The establishment of the Animal Breeding and Genetics Research Organisation of the Agricultural Research Council was described in the notes which appeared in the 'Transactions' last year (Volume 60). The headquarters of the organisation are in Edinburgh, but like the Agricultural Research Council itself it has responsibilities in all parts of Great Britain. Work involving the breeding of farm stock is to be carried out at field stations in various parts of Great Britain where the environment is suited to the respective kinds of animals. Some of these stations have already been secured and are mentioned later.

Fundamental Studies include much research which might seem very remote from the problems with which the stock-breeder is faced, but are necessary to build up a foundation of knowledge regarding ways in which heredity operates.

Some of the work with small laboratory animals is, however, of more obvious importance to the stock-breeder, and the following may be mentioned as examples: Prenatal Development of Mammary Gland; Selection for High Milk Yield; Genetic Control of Body Size; Selection under Good and Bad Conditions; the Effect of Inbreeding combined with selection on Homozygosity and Fertility; Nature of Heterosis (hybrid vigour).

Field Work.—Research based on data obtained from a variety of sources—Private Breeders, Milk Record Associations, Artificial Insemination Centres, Milk Marketing Boards, Breed Societies, &c.—is being conducted on a variety of problems, of which the following may be mentioned:—

Characteristics of British Dairy Breeds.—Analyses are being made of the milk production records of selected herds of pure bred cattle

of six breeds. Data are thus being collected on the breed characteristics in respect of total yield, fat percentage, shape of lactation curve, and figures obtained for heritabilities, mortalities, genetic correlations, &c.

Maximum possible Annual Rate of Gain.—The insertion of numerical values derived from the above investigation into theoretical equations makes it possible to estimate the maximum possible rate of gain in milk yield in a closed herd with the heritabilities, mortalities, &c., actually found in this country. This turns out to be of the order of 1 per cent of the total yield per annum.

Inheritance of 70-day Milk Yield.—With special reference to its practical use as a selection index.

Migration in British Cattle.—The extent of migration (mainly bulls) was estimated in order to discover whether the cattle populations of different regions were sufficiently isolated from one another to allow of the formation of sub-breeds. This turned out not to be the case in the widespread breeds of Shorthorns and Friesians.

Survey of British Breeds of Sheep.—Most of the breeds of sheep in England and Wales have been studied from the point of view of their economic importance, systems of breeding and management, and adaptation to their characteristic environments. A similar study has been made of Blackface sheep in Scotland, and special attention has been given to the alleged loss of hardiness stated to be caused by modern methods of breeding, feeding, and selecting rams.

Field Stations.—Three field stations have been secured: (1) A Pig Station on the Bush Estate near Edinburgh. It is expected that breeding operations will begin early in 1950. (2) A farm for research in the breeding of dairy cattle. This is in North Staffordshire near the Cheshire and Shropshire borders, in the dairy farming area with the greatest cow population in Great Britain. Pending the erection of suitable accommodation for experimental work a temporary stock of Ayrshire cattle was secured and will be replaced in the near future with pedigree Ayrshires, Friesians, and Jerseys. (3) A hill farm in North Wales for work with Welsh Mountain sheep, which next to Blackfaces are the most numerous of our British breeds. Other stations will be established as opportunity occurs.

Identical Twin Calves.—For certain kinds of experimental work identical twin calves appear to have great possibilities. They are produced by the fertilisation by a single sperm of one egg, which afterwards divides, and thus they are of identical genetic constitution. Following work in Sweden and New Zealand, collection of these calves is being made, and a preliminary experiment to

measure their value for experimental purposes as compared with ordinary twins and half-sibs has been started.

Inbreeding in Pigs.—With the co-operation of several Agricultural Colleges and Institutes a preliminary test of inbreeding has been started, mainly to ascertain what undesirable recessive characters occur in various strains of one of our most important breeds of pigs. The results suggest that only a comparatively small proportion are sufficiently free of undesirable characters to bear close inbreeding.

Hereditary Defects.—In addition to the defects uncovered by the exploratory experiment with pigs mentioned above, a number of defects, probably of genetic origin, have been reported both by Breed Societies and private breeders. The following are examples: Cud spilling in sheep; Dropsical calves; Bulldog calves; White heifer disease; Various deformities in lambs and in pigs.

It is usually possible to recommend comparatively simple ways of eliminating or greatly reducing such troubles, provided that full information regarding the occurrence of the defect in ancestors or near relatives is obtainable. Unfortunately the tendency to maintain secrecy about such occurrences still often hampers investigations.

POULTRY RESEARCH CENTRE.

The Poultry Research Centre was established by the Agricultural Research Council in September 1947 and a site for it was provided by the University of Edinburgh in close proximity to the Institute of Animal Genetics. Building operations are in progress and it is hoped that by next year adequate staff and facilities will be available to enable an extended programme of research to be embarked upon.

The problem of pullet mortality has been under investigation and some interesting results have been obtained. Data from the Centre's inbred flock of Brown Leghorns has shown a tendency for particular non-specific pathological conditions, such as cannibalism, kidney and reproductive troubles, among others, to be associated with certain of the lines maintained and indicate clearly the possibility that these conditions have a heritable basis. An average annual loss of 11 per cent of pullets due to non-infectious diseases has been encountered, but when crosses between inbred lines are made the loss from these causes is reduced to less than 3 per cent in the pullet year.

For a number of years now a study has been made of the susceptibility of the flock to cancer and other allied conditions. The natural incidence of such growths in the Edinburgh stock is extremely small, although they cause a serious loss among the general poultry population. Experiments on tumour transmission showed that one particular inbred line had an obviously high resistance to the

production of fatal cancer. This resistance is not inherited on a simple basis and the investigations on the nature of it are being continued. It is interesting to note that this inbred line had shown itself earlier to be the most resistant to the transplantation of chemically induced tumours.

The development of packing stations has focused attention on defects in the home-produced egg and a frequent cause of rejection is the inclusion of a blood spot.

This condition is found in eggs from all poultry populations, but has not reached the high level reported from various sources abroad. It remains however a potentially serious cause of loss to the poultry farmer.

While it has not been possible to determine the primary cause of blood spots in eggs or of the production of miniature or dwarf eggs, both these abnormalities have been shown to depend in some part on inheritance. The proportion of blood spots in pullet eggs rose as the season progressed and then fell off again towards the end of the laying cycle. No similar seasonal trend was found for the production of miniature eggs. More blood spots tend to occur in the first half of a clutch than the second. The number of blood spots and of birds giving them reached a maximum in the bird's second laying year.

A problem frequently encountered in breeding for high egg production is an associated decrease in the average size of eggs laid. The trend of weight is downward with increasing clutch length, but the differences become progressively smaller between successive eggs. Though egg weight increased from March to October shell weight decreased over the same period. In normal birds, increases in yolk size were accompanied by higher albumen weights; but in those in which production tended to break down, this association was not maintained.

Variations in yolk size depends on the time between ovulations; those in albumen weight on both the size of the yolk and the time between the passage of one egg and the next through the oviduct. Shell weight variations are related and the time the egg remains in the uterus—a factor which appears to be partly controlled by the time of ovulation.

ANIMAL DISEASES RESEARCH ASSOCIATION.

MOREDUN INSTITUTE, GILMERTON, EDINBURGH.

The investigations upon which the Association has been engaged in recent years are being continued. These include grass sickness in horses, lactation tetany in cows, white scour and allied diseases in calves, scrapie, enzootic abortion in ewes, tick pyæmia, pining in sheep and young cattle, bracken poisoning, yellowsis, tick-borne fever, parturient redwater, and mastitis.

THE ROWETT RESEARCH INSTITUTE.

BUCKSBURN, ABERDEENSHIRE.

The main lines of investigation which were in progress during the year 1948 were as under :—

1. The influence of various factors on the digestibility and utilisation of rations by farm stock : the two factors studied so far have been pregnancy and lactation and the animals used were ewes.

2. For the purpose of studying the chemical activities and composition of rumen micro-organisms a method has been elaborated for the separation of these micro-organisms and other fractions of the rumen content. The method has been applied to : (a) an assessment of the quantities and distribution of micro-organisms and other constituents in rumen contents, (b) carbohydrate composition of rumen micro-organisms, (c) a study of the actual site of action and concentration of cobalt in the diet (with Dr R. L. Mitchell of the Macaulay Institute), (d) a study of the chemical activities of the rumen micro-organisms.

Chemical studies of the nitrogenous components of rumen bacteria have been begun, with a view to assessing the contribution of the bacteria to the nutrition of the animal under different dietary regimes. These studies involve comparative studies of the nitrogenous components of various feeding-stuffs, which may have an intrinsic interest.

The amount of iodine in the micro-organisms of the sheep's rumen was also investigated and linked up with the other studies on their composition.

Experiments on absorption of short chain fatty acid from the rumen of sheep are in progress to see whether the size of molecule influences the rate of passage of the anion across the rumen epithelium when the reaction is slightly alkaline.

3. Studies have continued on feeding high-protein supplements to pregnant and non-pregnant sheep on various planes of nutrition. Some of the poor utilisation observed can be attributed to decomposition of the protein in the rumen. The nature of this process is being studied, with a view to minimising these losses and other possible deleterious effects of the decomposition.

4. It was observed that sheep when maintained on an exclusively hay diet tended to lose their appetite. They recovered their appetite on the addition to the diet of a small quantity of a yeast extract preparation rich in "accessory food factors," and there was a corresponding gain in weight. This question is being further studied.

5. Experiments on the influence of pregnancy and lactation on the mineral reserves in the skeleton of the rat have been concluded. A technique has been developed to assess the extent of deposition

or depletion of reserves in the skeleton. A beginning has been made in applying the test to sheep under controlled conditions of feeding. Preparation is being made to extend the studies under field conditions so that an ultimate technique for assessing the mineral status of rough hill grazings can be developed.

6. Work on the preparation of synthetic diets for studies of chick nutrition has been continued. Investigations are in progress to determine the interrelations between different vitamins and minerals in metabolism.

7. Studies of improvement in the design of animal experiments are in progress in collaboration with Mr M. H. Quenouille of the Statistics Department of Aberdeen University.

8. Some studies have been made of serum proteins in sheep in relation to plane of nutrition and to the occurrence of immune bodies in blood and colostrum.

9. Trials have been begun to assess the feeding value for chickens, pigs, and lactating cows of a herring "alkali reduction" meal prepared as a by-product from the Herring Board's herring-oil factory at Wick.

10. A study was made of thyroid enlargement and other changes related to the mineral content of drinking waters of England, Scotland, Italy, and Morocco.

11. The work on the effect and interactions of Ca, Mg, and F supplements on organs and bones of the rat was continued.

12. It has been confirmed that diet may influence the course of some infections, and work is in progress to define as many relationships of this kind as precisely as possible. Meantime it has been noted that the dietary effect on resistance may appear only in the second generation. Against some types of infection well-fed animals are not more resistant and may even be more susceptible.

13. Pyridoxin-deficient rats have been further studied and the lowered thymus weight confirmed. Many of the animals suffer some damage to the kidneys and this is associated with hæmaturia.

14. Studies of the bacterial decomposition of starch and cellulose in the intestinal tract have yielded information of considerable interest on how plant and food structure affects digestibility.

15. The difficulty of rearing hardy stock free from disease in indoor piggeries during the winter has received further study. Provision of additional comfort for the indoor litters by use of wooden ark huts within the piggery led to a measurable improvement in results; this emphasised the importance of protecting the animals against damp and cold draughts. If pigs are denied access to soil and grass they should be given iron. This may be simply done by dosing with one teaspoonful of reduced iron on the first or second day of life. There is some advantage in repeating the dose as often as possible at two-day intervals until solid food is being eaten, but even a single dose is very much better than nothing.

16. Estimates are being made of the flow of food leaving the stomach of the sheep—i.e., 300-450 ml. per hour. This work has involved studying the secretion of gastric juice from a "Pavlov"

pouch in sheep, as the volume of material leaving the stomach consists of food plus gastric juice.

17. An investigation into the nerve supply of the stomach is being made. This has involved histological studies of the development of the intrinsic nervous plexus in the wall of the stomach in the foetus. In addition, the result of cutting the nerve supply to the stomach in young suckling lambs is also being investigated.

18. A study into the rate of passage of food residues along the alimentary tract is being made, and the fate of morphologically distinct organisms of the rumen when they reach the lower part of the alimentary tract is under investigation.

19. The toxicity of clover juice has been studied, administering this material directly into the rumen of sheep. If sufficient is given the result is fatal. Relation between the toxicity of clover juice and the presence of HCN is under investigation, while experiments concerning the effect of pressure alone in the rumen are still in progress.

20. Further experiments on the nutrition of the pregnant ewe have confirmed earlier findings that strong, healthy lambs with a low death-rate and ewes with a good milk supply at lambing can only be obtained through good feeding of the pregnant ewe, particularly during the last few weeks of pregnancy. There are indications that udder size at lambing is a measure of the milking qualities of the ewe and of the weight of the lamb at weaning. Studies are in progress on udder development of the ewe under varying nutritional levels during the first and succeeding breeding years.

21. To determine whether ewes make better use of roughage in a natural or finely ground state ewes are being fed indoors on hay, either cut or finely ground, and are being compared with others on a ration of concentrates.

22. An experiment on the feeding of iodinated casein to dairy cows was started in the autumn of 1946 and is expected to run for several years. Its object is to investigate the effect on health and normal reproductive span of feeding iodinated casein to cows during successive lactations. Twenty grams of iodinated casein per day is fed from the 16th to the 27th week of lactation. The results in the first two lactations are very similar to those obtained in previous experiments—viz., increased yields during treatment followed by a rapid decline, an increase in pulse rate, and some loss of body-weight. To date there has been no obvious effect on the health and reproduction of the cows.

23. The staff of the experimental farm has been engaged in investigations in co-operation with the staff of the North of Scotland College of Agriculture. The investigations are included in the North of Scotland College of Agriculture section of this report.

SCOTTISH PLANT-BREEDING STATION.

CRAIGS HOUSE, CORSTORPHINE, EDINBURGH.

In view of the long-term character of the research in progress it is customary each year to consider briefly only one aspect of the work being done at the Station in the breeding of cereals, potatoes, herbage, root crops, and beans. On this occasion that section of the work dealing with potato virus diseases will be reviewed.

The main objective of this work is the provision of information and material which will assist in breeding for resistance to the more common viruses which attack the potato—viz., the A, X, Y, and leaf-roll viruses. Investigations in progress are concerned with the nature and inheritance of various qualities of resistance and with the establishment of efficient standardised tests for the detection and evaluation of resistance characters.

Virus A.—Work with this virus has comprised routine tests of seedlings and new varieties for the hypersensitive character upon which field immunity depends, and the investigation of the inheritance of this character in cultivated varieties and South American species of potato. Hypersensitiveness to virus A has been found to be linked genetically with hypersensitiveness to virus X in both cultivated and wild species, and also, in *Solanum simplicifolium*, with hypersensitiveness to viruses Y and C. These linkages are being used to further inquiry into the relationships between the hereditary factors which determine hypersensitiveness to different strains of the X and Y viruses. Some difficulty has been encountered in detecting hypersensitiveness to virus A and also in recovering the virus from susceptible hosts. These difficulties have been surmounted, however, by improvements in the technique of infection and by using an extremely sensitive variety of *Solanum demissum*, obtained from a Swedish source, as a diagnostic test plant. Upon the introduction of these improved methods of test a re-examination was made of a number of varieties which had hitherto been classified as of unknown or doubtful reaction to the virus. Tentatively they had all been looked upon as susceptible. A number of them, however, including the varieties Arran Pilot, Di Vernon, Edzell Blue, May Queen, Puritan and Witchhill, have now been found to be hypersensitive and field immune from virus A.

Virus X.—Various aspects of resistance to virus X have received further attention. In field trials, studies have been made on the effects of time of inoculation, method of inoculation, manuring, and strain of virus on the incidence of infection in a number of field-immune and non-field-immune varieties. All the variables, with the exception of manurial treatment, affected the incidence of infection and parallel differences in behaviour were found between the two groups of varieties. From this and other evidence it is inferred that the hereditary factors which control resistance to the

establishment of infection in non-field-immune varieties also control the degree of hypersensitiveness in field-immune varieties. There is indication, in fact, that in certain circumstances these factors are the arbiters between field immunity and total susceptibility.

Studies on strains of virus X have been continued in analytical examinations of naturally infected material and in the comparison of isolated strains in their rates of spread and in their effects on potato varieties. The problem of differentiating strains is exceedingly complex. Very few sources contain single strains of the virus and in many cases several different strains have been recovered from a single source.

In the studies on rates of spread, indication has been obtained that mild strains spread more readily than severe strains.

Yield trials have given results showing that the virus usually depresses yield, the amount of depression being correlated with severity of symptoms. In 1947, an abnormally dry year in which premature ripening and low yields were of general occurrence, the varieties Majestic and Kerr's Pink infected with mild strains of virus X unexpectedly gave higher yields than the healthy controls.

Work with virus X has been greatly facilitated during recent years by the use of serological methods for the detection of the virus.

Virus Y.—Studies on hypersensitive resistance to virus Y have been confined largely to the character found in the South American species *Solanum simplicifolium* and a variety of the Mexican species *Solanum demissum*. The inheritance of the necrotic response to infection has been followed in hybrid seedling progenies derived from these two species in crosses with *Solanum brevimuconatum*, *Solanum Rybinii* (two varieties), *Solanum stenotomum*, and cultivated varieties of *Solanum tuberosum*. Many of these interspecific hybrids combine a high degree of resistance to infection, a character found particularly in *Solanum Rybinii*, with the ability to respond with a necrotic reaction, and they show promise of being effectively field immune under all conditions of natural infection.

The apparent immunity from virus Y of a variety of *Solanum Rybinii* has been investigated. The parent plant has not yet been infected by any method of inoculation, although in progenies derived from it there is indication that the character is not a true immunity but a high degree of resistance to infection.

In a survey of Y-infected commercial material from Scottish sources only two strains of the virus were found. Another four strains have been obtained from isolations made at Rothamsted Experimental Station and from naturally infected South American species, and these have been used in experimental work.

Leaf-roll.—A long-term investigation of the inheritance of resistance to leaf-roll was brought to a conclusion in 1947. Altogether 4709 seedlings in 59 progenies were tested in standard field trials over a period of ten years. The results of these tests gave clear indication that resistance to leaf-roll is a heritable

character and that it is quantitatively expressed. There is no sharp differentiation, therefore, between susceptibility and resistance, and this raises the problem of providing a rapid and reasonably accurate test for evaluating degrees of resistance. At present the only adequate test available is one of comparison under exposure to infection in the field. Trials over a period of years have shown, however, that in Corstorphine the incidence of infection is frequently so low that only the most susceptible varieties contract infection when 50 or fewer plants are so exposed. Furthermore, even in the better years positional effects have been so great as to nullify all attempts at accurate grading. To overcome these difficulties possible forms of laboratory tests have been investigated with the object of obtaining uniformity in the assessment of resistance values. Progress has been made in this work and satisfactory results have been obtained by exposing units of 10 sprouted tubers to infection at different levels.

The Spread of Viruses.—The rate of spread of viruses is determined by a number of factors of which strain of virus and variety of potato have already been referred to. By using standard sources of virus and the variety King Edward as the recipient of infection a study has been made of the spread of virus Y and the leaf-roll virus in relation to the aphid populations over a number of years. This study has indicated that virus Y is disseminated chiefly, but not entirely, by winged aphides migrating into the potato crop during the early part of the season. The spread of leaf-roll, on the other hand, appears to take place chiefly, but again not entirely, through the movement of wingless aphides within the crop after contact between plants has been established.

The spread of a common virus X has been followed from year to year in the variety Majestic. The path of spread was clearly marked as by contact between plant and plant, principally along rows, but occasionally between rows. The rate of spread was slow, the virus rarely progressing beyond one plant in each season. In this work indication was obtained that in the majority of instances infection occurred too late in the season for the production of symptoms in that year. In these particular trials one case of remote infection occurred, the strain of virus differing from the one being used as the standard.

Breeding.—A number of interspecific hybridisations have been made for the purpose of (1) introducing resistant characters of wild forms of potato into commercial-type seedlings; (2) supplying material for the study of the inheritance of resistant characters; and (3) combining resistance to different viruses with resistance to blight. Several progenies combining resistance to viruses X, A, Y, and leaf-roll with resistance to blight have been raised. Many of the individual plants of these progenies were unproductive of tubers when grown in the field, but this and other "wild" characters are gradually being eliminated by further hybridising with commercial varieties.

THE HANNAH DAIRY RESEARCH INSTITUTE.

KIRKILL, Ayr.

The principal investigations carried out in the past year can be conveniently summarised under the following headings:—

Experiments on the Farm.—At present the average area farmed each year is 150 acres. The stock numbers about 70 to 75 dairy cattle, with about 30 cows in milk.

For the past eight years the object of one of the main experiments carried out on the farm has been to determine whether self-sufficiency in feeding-stuffs can be achieved on a dairy farm of this size. While this was of crucial importance under war conditions it is also likely to remain a live problem for many years to come unless unexpected changes take place in the world supply of feeding-stuffs and in the currency position of this country. Since 1940 no feeding-stuffs, either imported or home produced, have been purchased for use on the Institute's farm. In fact, during that period the farm has been able to feed all its own stock, produce some 17,000 gallons of milk per annum, and sell about 30 tons of grain and 80 tons of potatoes from the crops grown on the farm. The milk output is equivalent to about 125 gallons per acre, a figure well above the pre-war average for any group of dairy farms in Ayrshire or the South-West of Scotland, in spite of the fact that before the war purchase of imported feeding-stuffs did not have to be limited. In the last year or two, as experience in the self-sufficiency programme has been gained, milk production has reached 24,000 gallons without any compensating fall in crop sales. The average yield per cow is about 700 gallons, and the output is reasonably level throughout the year, winter production being well maintained. These results have been achieved by adopting the following general principles: (a) a substantial increase in the output of grass herbage by improved methods of grassland management; (b) the conservation of maximum quantities of herbage for winter use, as hay, silage, or artificially dried grass; and (c) an increase in the production of arable crops of relatively high-protein content, particularly beans. Much work has been done on all these three aspects of the problem.

If the best results are to be obtained on the dairy farm without the use of imported feeding-stuffs, it is essential that grassland should be efficiently used. During the past year, therefore, experiments have been made with the object of attaining better utilisation of grazing. The area in which the cattle were allowed to graze at any given time was controlled by movable electric fences. The results indicated that grass could be grazed more economically and efficiently by this means than is usual on many farms.

A winter feeding experiment showed that dried grass containing 16 per cent crude protein was as good for milk production as

a home-grown concentrate mixture consisting of equal parts of oats, beans, and dried grass.

Earlier work on the intensive production of herbage for drying has now been published and the experiments have been continued and extended. The value of grass leys has been compared with that of annual crops and the effects of light and heavy dressings of nitrogenous manures on grass production have been studied. It appears probable that 300 lb. nitrogen per acre is the maximum which can be applied with success, and that with heavy dressings of this type potash is rapidly depleted and may become a limiting factor.

A study of the response of different strains of grasses to dressings of nitrogenous manures and their compatibility with white clover has also been made.

An investigation has been begun on the influence of environmental and hereditary factors on yield of milk and persistency of lactation. Data from 12 herds for ten years, involving records for over 5000 lactations, are being analysed. The work will probably take a further year to complete. A typical conclusion which has already been made from the work at its present stage is that under conditions prevailing in South-West Scotland heifers calving for the first time at 32-35 months old give higher yields for the first four lactations and also greater persistency in lactation than heifers calving either earlier or later.

Biochemistry.—In several parts of the world attempts have been made to increase the milk production of cows by including iodinated protein in their feed. The action of iodinated protein depends on the presence of a hormone thyroxine, which has the effect of increasing the animal's metabolic rate. Extensive experiments have been made in the Biochemistry Laboratory to determine the effect of thyroxine treatment on the nitrogen, calcium, and phosphorus metabolism of cows. A study is also being made of the effect of the hormone on the composition of milk, with particular reference to some of the mineral and vitamin constituents which are present only in small amounts, but which are exceedingly important in nutrition.

Experiments begun some years ago on some aspects of rumen digestion are being continued. During the past year particular attention has been paid to the requirements of the rumen bacteria for certain metals and the toxic effects of excess of these metals. The information gained from these experiments not only helps to a better understanding of the complex digestion processes of the rumen, but may also have an important bearing on the special requirements of ruminants for some of the "trace" elements.

Nutrition.—A new metabolism house is at present being built, and during its erection it is not practicable to continue the Institute's nutrition experiments with lactating cows. Experiments of that type will be resumed as soon as the new building is ready. In the meantime a thorough investigation is being made of the

metabolism of the calf during the first few weeks of its life. One object of this work is to obtain a better understanding of the nutritional requirements of the young calf so that it will be possible to maintain it in better health and thus reduce both calf mortality and the incidence of scouring. The results of the first series of experiments will be published shortly.

Physiology.—An extensive study on the acclimatisation of dairy cattle has begun. A specially constructed air-conditioned room has been built in which it will be possible to observe the physiological reactions of cattle throughout a wide range of temperatures and relative humidities. Provision has been made for the maintenance of any temperature between 55° and 120° F., and any relative humidity between 40 and 100 per cent, with additional adjustments for alterations in rate of air movement and lighting.

In connection with the acclimatisation work a study has been undertaken on the structure of sweat glands in cattle and of their distribution over the body surface. This has involved the adoption of new histological techniques capable of dealing with the tough bovine hide. The work is laborious and time-consuming, but it is felt that fundamental information of this type is essential if problems associated with the acclimatisation of dairy cattle are to be thoroughly understood. It has already had an important application. Certain Russian workers have claimed that the milk-producing capacity of a cow can be estimated or foretold from the number of sweat glands per unit area in the pinna of the cow's ear. If this claim were true it would be of considerable importance, for it would supply a relatively simple method of assessing the milk-producing capacity of a cow. The claim has now been thoroughly investigated at the Institute, and it can confidently be stated that at any rate for the Ayrshire cow there is no relationship between milk yield and the number of sweat glands per unit area in the ear.

Diseases of Dairy Cattle.—The work reported in previous years on mastitis and on some of the causes of calf mortality has been continued in co-operation with workers at other research centres. In connection with problems of sterility in dairy cattle an intensive bacteriological study has been made of the uteri from 230 cows slaughtered at the local abattoir. The organisms isolated were examined for their morphological and biochemical characteristics.

Technical Chemistry.—The Technical Chemistry Laboratory is associated with much of the research work which is carried out at the Institute on grass and grass products and is responsible for most of the chemical analyses involved in the farm investigations on the intensive production and utilisation of herbage.

In Britain dried grass is still frequently sold on a carotene basis, particularly where it is to be used for poultry feeds. A detailed investigation has therefore been made on factors affecting loss of carotene in grass meal. These factors include light, oxygen,

moisture content, and storage temperature. Some data have also been collected for baled dried grass. It has been found that if the wilting time in drying the grass is limited to one to two hours the total loss of carotene resulting from the wilting and drying process should not exceed 20 to 25 per cent of that present in the fresh grass. In storage, whether the grass is in bales or in the form of a meal, the most important factor affecting the carotene content is the amount of oxygen available to the grass. The amount available should be kept as low as possible. A low storage temperature also assists carotene preservation.

The Technical Chemistry Laboratory is responsible also for the dried milk investigations which form an important part of the Institute's programme. During the past year a detailed study has been made of the nature of the insoluble portion of milk powders manufactured on different types of plant, and the value of a number of different methods of measuring the insolubility of dried milks has been assessed.

Bacteriological Research.—One of the main objects of the work in the Bacteriological Laboratory is clean milk production. In the past year a report has been published on the use of various platform tests for the rapid examination of milk on its arrival at the creamery and the relative merits of the tests have been examined. A report has also been prepared on the experiments which were made a year ago to compare the relative merits of hypochlorites and steam as sterilisation agents on the farm, an investigation which was carried out in collaboration with members of the staff of the West of Scotland Agricultural College and in which eighteen farms took part.

The changes which occur in the temperature of milk during its transit from the farm to the creamery in the summer months have been determined for both long and short distances in the South-West of Scotland. The changes which occur in this district even in relatively warm weather appear to be slight.

An investigation of the bacteriological and economic aspects of different methods of cooling milk on the farm was made last year and will be continued in the present summer.

THE MACAULAY INSTITUTE FOR SOIL RESEARCH.

CRAIGIEBUCKLER, ABERDEEN.

The policy of the Institute is to study the soil in all its aspects with a view to the maintenance and improvement of soil fertility. The following is a brief summary of work carried out during 1948 :—

1. *Soil Fertility.*—Field, pot, and laboratory studies have been developed on the general lines detailed in previous years' reports. Particular attention has been given to (1) methods of assessing

the nutrient requirements of soils and crops; (2) increasing the effectiveness of fertilisers, especially phosphate; and (3) the effect of pedological factors on soil productivity and on the nutrient requirements of soils. Work included:—

- (1) General Manuring and Liming Experiments.
- (2) Investigations on Phosphate Relationships of Soils.
- (3) Fertiliser Placement Experiments.
- (4) Forest Nursery Investigations.

2. Advisory Work.—Field and laboratory examination of soils for advisory purposes has been continued and extended, and analyses have been made of materials such as limestones, calcareous sands, wood ashes, compost, and various by-products likely to be of value on the land.

Analytical data for advisory soils from Aberdeenshire examined during the years 1941-1947 have now been recorded, grouped in terms of the various associations recognised in the reconnaissance soil survey. In all associations deficiencies of lime and phosphate are widespread and potash deficiency relatively less pronounced. In regard to individual soil associations lime deficiency appears to be slightly less pronounced on the soils of the Inch and Cruden associations than on the others, while phosphate deficiency is less pronounced in soils of the Inch and Kemnay associations. Soils of the Cruden associations are rather higher in readily soluble potash than the others, while soils of the Countesswells, Inch, and Corby associations are relatively low in potash.

3. Pedology—Soil Survey.—The reconnaissance soil survey of Kincardineshire on a scale of 2·5 inches to 1 mile has been continued from the boundary reached in the previous season, which ran east and west from Crawton to Strathfinella Hill, through the area known as the Howe o' the Mearns to a line drawn east and west about 1 mile south of Laurencekirk. Detailed surveys on a scale 6 inches to 1 mile are now being made of small selected areas within certain of the dominant associations.

Two new associations have been established:—

- (1) Strathfinella . Loam to sandy loam on till derived from arenaceous Old Red Sandstone.
- (2) Auchinblae . Light-textured loamy-sand to sandy loams on stratified fluvio-glacial sand and gravel of Old Red Sandstone origin.

Soil Geology and Mineralogy—South-West Scotland.—The reconnaissance soil survey of suspected areas of pining in sheep due to cobalt deficiency has been continued on the borders of Kirkcudbrightshire and into Dumfriesshire. The soils have been found to be mainly derived from sedimentary rocks (shale, grit, greywacke, and sandstone) or from glacial drift largely derived from such sediments.

Central Scotland.—The glacial drifts forming the parent materials of the soils on a farm in Perthshire and estates in Midlothian have been differentiated and detailed soil maps prepared on the scale of 6 inches to 1 mile.

North-East Scotland.—Field work has been carried out in connection with the soil surveys of Aberdeenshire and Kincardineshire and soil parent materials examined to determine the soil associations. The soil type and parent materials in various areas of these counties where experimental plots are being laid down have also been examined.

The mineralogical examination of the fine sand fractions of soils and their parent materials obtained during the soil surveys has been carried out. The soil parent materials are mainly glacial drifts of mixed lithological origin and the determination of the mineral character of the matrix of the drift serves to determine the soil association.

X-Ray Analysis.—The examination of the clay fractions of Aberdeenshire soils collected in the field by the Survey Department of the Institute has been continued. In this work a number of general rules are becoming apparent. There is, for example, in soils derived from basic and ultra-basic parent materials a tendency for the poorly drained profiles to contain montmorillonite-like clay minerals, and for the freely drained soils to contain vermiculite types. In soils derived ultimately from acidic and intermediate rocks, on the other hand, drainage appears to have little influence in conditioning the types of clay minerals present. Both the vermiculitic and montmorillonitic clay minerals occurring in these soils are derived by weathering from an octophyllite micaceous clay mineral which gives a diffraction pattern similar to that of biotite. The apparently anomalous nature of the X-ray data on certain of the soil clays which has been a source of some difficulty has been linked up with the peculiar properties of vermiculite. This mineral is now being studied in the pure state.

Physico-Chemical Investigations.—Differential thermal analysis examination of soil clays has been carried out and some 110 minerals and mixtures have now been examined to provide standard curves for the interpretation of curves obtained with soil clays. About 90 soil clays have so far been investigated, but most of these have come from the same soil association, the same set of profiles being examined several times to provide data on differences due to particle size and drainage. A differential thermal analysis study of the diatomite occurring at Loch Cuithir, Skye, has been completed. Work has also been carried out on the vermiculites and investigations into the removal of free iron oxide from soils and clays have continued.

A joint study is being made of the clay material formed from a decomposed granite in Aberdeenshire. It has been shown that the clay mineral is an alteration product of the felspathic material in the granite.

4. *Soil Organic Matter.*—Routine consultative work and experi-

ments have continued, chiefly in connection with peat and other soil ameliorants.

Chemical Investigations.—Investigations have been centred mainly around the soluble carbohydrates present in soil. Some progress has been made on the studies of the humus complex and in preliminary work on the organic nitrogen compounds present in soil.

Microbiological Investigations.—Work has been carried out on the mechanism of synthesis of bacterial polysaccharides. Detailed investigations are being undertaken of the polysaccharides synthesised by bacteria isolated from a variety of soils.

The mycological aspect in composting has received major attention during the year and interesting observations have been made.

Bacteriological and mycological investigations into soil and soil-plant problems have been started and will, particularly from the micro-ecological aspect, form the main line of study in the future.

Forestry Investigations.—An investigation is now in progress into the changes which take place in soil when canopy is being formed.

5. *Spectrochemistry.*—Determinations of soil and plant constituents by spectrographic methods, involving the production of a spectrogram on the photographic plate and the measurement of the density of the spectral lines of the various elements, have been further developed in the course of the year.

The cathode layer arc technique for the determination of trace constituents in samples following chemical concentration by means of organic reagents has been applied on a routine scale to the examination of soil and herbage samples where various animal disorders, probably due to deficiency or excess of trace elements, occur. Cobalt investigations made in collaboration with other research institutes include determinations in soils, plants, animal organs and excreta, and in various rumen bacterial fractions. From the latter it would appear probable that rumen bacteria play an important part in cobalt deficiency diseases of ruminants, and investigations of trace element status of bacteria are being continued.

Analysis of hill pasture samples in connection with yellowlegs investigations has provided useful information on the seasonal variation of trace element content of different species. The variation in the amounts of trace constituents present in easily soluble form in soil profiles is being studied.

The use of the flame emission spectrographic technique for the determination of potassium, calcium, and other alkalis and alkaline earths in soils and plants is being continued, and at the same time the technique of direct photometry, involving the direct measurement of spectral line intensity without recourse to a photographic plate, has been developed. This technique is well adapted to the assessment of potassium in soil extracts for advisory purposes and provides quick and reliable determinations.

6. *Plant Physiology*.—The study of the soil-plant relationship has been continued. This has involved laboratory and field investigations on the absorption, translocation, and utilisation of nutrients by plants covering (a) plant nutrition, (b) ion antagonism and its effect on the availability of magnesium, (c) nutrition of normal and abnormal bracken, and (d) the interrelationship of soil treatment, plant composition, and disease incidence.

In connection with the diagnosis of nutritional abnormalities in plants a further study has been made of the fundamental aspects of the plant-analysis technique used in determining the nutrient status of plants, and investigations carried out on methods of chemical analysis (with special reference to calcium, magnesium, and nitrate) suitable for use in plant analysis. Attention has also been given to the development of a satisfactory plant-analysis technique for advisory purposes.

7. *Special Investigations undertaken in collaboration with—The Animal Diseases Research Association*.—Collaboration has been continued on problems of the interrelationships of soil and herbage upon animal health. Spectrographic determinations have been made on samples of soils, plant materials, animal organs and excreta, and foodstuffs in connection with joint investigations on cobalt deficiency, yellowises, and lactation tetany.

The Rowett Research Institute.—Numerous samples, in particular samples of bacterial fractions separated from sheep rumen, have been analysed for trace elements in connection with investigations into the action of cobalt in ruminants. Other trace element determinations on various materials used for the production of artificial diets have also been carried out.

Differential thermal analysis examinations of bone-salt and various calcium-phosphorus compounds are being carried out in conjunction with the Rowett Research Institute, with a view to elucidating the nature of bone-salt.

The Hannah Dairy Research Institute.—Problems arising in the manuring of grass have been studied and the necessary experimental work undertaken.

The Scottish Colleges of Agriculture.—The Macaulay Institute and the Colleges of Agriculture have collaborated in the application of experimental findings to practical agriculture.

Forestry Commission (Research Branch).—Co-operative work with the Research Branch of the Forestry Commission on various aspects of the nutrition of forest tree seedlings has been continued.

The Agricultural Research Council (Scottish Raspberry Investigation and Strawberry Disease Investigation).—Experiments on strawberries, raspberries, and gooseberries to correlate soil treatments with vegetative development, fruit yield, tissue composition and disease resistance, have been established in collaboration with the workers of the Agricultural Research Council Units.

THE EDINBURGH AND EAST OF SCOTLAND
COLLEGE OF AGRICULTURE.

DEPARTMENT OF ADVISORY BACTERIOLOGY.

Bovine Mastitis.—A paper on the influence of season and stage of lactation on the incidence of infection due to *Strep. agalactiae* is in press. A significantly greater number of new infections occurred in the autumn months (August, September, and October) than at any other time of the year. Although a greater number of new infections occurred in the early stages of lactation than in the later stages, the figures obtained were not statistically significant.

Evidence will shortly be published to the effect that there is no difference in amount of infection and rate of spread of infection between stalled herds and herds kept in courts or permanently in the open.

Data have been collected and analysed on the relationship between milk yield and infection with *Strep. agalactiae*, but no statistically significant conclusions have been reached. Preliminary work with an individual quarter milking machine has given more promising data, and work on this line is being continued.

Work on the eradication of *Strep. agalactiae* in conjunction with the Veterinary Investigation Officer by repeated testing and treatment with penicillin has yielded promising results, but several difficulties have been encountered and are now being investigated in more detail.

Infection of the Udder with Coliforms.—Persistent *coli* in T.T. milk with low plate counts was traced to three cows, each showing colonisation of *B. coli* in one quarter, though the milk from these quarters differed very little in composition from normal milk. One cow was successfully treated with sulphamezathine.

Green Manuring.—Detailed measurements were made to compare the value of Italian Ryegrass and English Broad Red Clover as green manuring crops when undersown with a cereal nurse-crop. This investigation is being continued.

Composting.—Some preliminary small-scale experiments were begun in an endeavour to overcome the difficulty of wetting straw, especially when in bales.

Field Beans.—Under greenhouse conditions the optimum pH for growth in sand was confirmed to be 6.5. Similar experiments are proceeding in soil.

DEPARTMENT OF ADVISORY BOTANY.

Weed Control.—Trials have been continued of selective weed-killers for the control of annual weeds in cereal crops.

Grassland Experiments.—These include studies of the seasonal productivity of several strains of perennial ryegrass, cocksfoot, and timothy grown in simple mixture with wild white clover, investigation of methods of measuring production of dry matter from grazed pastures, and the improvement of hill pasture by manuring and controlled grazing. A vegetation survey of the hill pasture at Sourhope is in progress.

Plant Diseases.—Investigation of the occurrence of Black Rust of cereals and grasses in the East of Scotland has been continued, with particular reference to the distribution of barberry, the alternate host of the causal fungus, and the effect of weather conditions on development of the disease in the field.

DEPARTMENT OF ADVISORY ENTOMOLOGY.

Potato-Root Eelworm.—In last year's report comment was made upon an experiment made in 1947 to test the efficacy of D.D. mixture as a control agent for this pest. The results then achieved did not prove to be significant. To check these results the experiment was repeated in 1948 at two farms. On neither did D.D. treatment reduce the number of infective cysts. Further, the plants were not improved in growth and the crop yield was not increased. It would, therefore, appear that D.D. does not offer a solution of the Potato-Root Eelworm problem.

Flea Beetles.—In the early part of the summer the Turnip Flea Beetle proved destructive to seedlings of turnips and swedes in certain localities. The risk of large crop losses was fortunately averted by an opportune change of weather, which enabled the plants to grow away from the attack.

The Cabbage Flea Beetle, which is rarely troublesome in Scotland, was found doing much damage to turnips in a Perthshire district.

Beet Carrion Beetle.—This insect, which is a serious pest of sugar beet on the Continent, is not important in the British Isles. It was recovered from a beet field in Berwickshire in June 1948, and this may be a first Scottish record.

The Strawberry Blossom Weevil.—This pest is apparently rare in Scotland and, so far as we can discover, has not been previously recorded as destructive to the strawberry crop in Scotland. The damage it does to the flowers and flower-stalks was reported by an East Lothian grower in May 1948, who suspected damage of the same nature during the six previous years. It may be controlled by application of D.D.T. dusts.

Greenflies.—Investigation of the greenfly problem in the Lothians is still proceeding. The summer of 1948 was remarkable for the

small numbers of both *Myzus persicae* (Potato and Peach Aphis) and *Brevicoryne brassicae* (Mealy Cabbage Aphis) on market garden crops in the Edinburgh area.

Pests of Cereals.—The caterpillar of the Common Rustic Moth (*Apamea secalis*), which mines and damages the stems of cereals, was encountered fairly frequently in the early summer of 1948, when search was being made for the maggots of Frit Fly in oats and Gout Fly in barley. The economic importance of the last two species in the College area is being investigated.

Caterpillar Tree-defoliators.—In last year's 'Transactions' attention was drawn to the large-scale defoliation of broad-leaved trees throughout Scotland. The kinds of caterpillars responsible were investigated at Strathtay, where various Owlets and Prominents as well as the Loopers of Winter Moths were discovered at work on the foliage. Among the last the caterpillar of the Mottled Umber was strongly represented.

A large proportion of the caterpillars was found to be parasitised by Ichneumon "wasps," and events in 1949 will probably show that the present outbreak is on the wane.

Biting Midges.—During the past two years a considerable quantity of insect material has been accumulated from box-traps exposed on suitable breeding sites. This material, consisting of midges and a rich assortment of other insects, is now being identified and classified.

In the course of the past season's operations a control experiment was carried out in which a Gammexane dust and a Gammexane emulsion were respectively applied to larval-midge infested ground. In the former the dust was applied so that the ground received 9 oz. of γ -isomer per acre as against a dose of 1 oz. of this isomer per acre in the emulsion. Both treatments were accompanied by an immediate reduction of the numbers of emerging midges. Whereas the residual effect of the dust persisted for fifteen weeks, that of the emulsion continued only for two weeks.

VETERINARY INVESTIGATION OFFICER SERVICE.

Abortion in Ewes—Berwickshire.—An intensive bacteriological examination was carried out on a large number of aborted lambs from many farms; in many cases the lambs were obtained immediately after abortion so that the material was suitable for bacteriological examination. In no case was any pathogenic organism isolated. In addition to ordinary bacteriological examinations chick embryo cultures were made from many cases, but again with negative results. Histological examination is at present being carried out in an endeavour to demonstrate virus inclusion bodies, but this work is not yet complete.

Hill Sheep Abortion.—A field experiment was carried out to ascertain the association of tick-borne fever with abortion. The results show that sheep "immune" to tick-borne fever do not abort as frequently as sheep which have not been made "immune." This experiment is being repeated.

Mastitis.—In conjunction with Dr Cunningham, Advisory Bacteriologist, the experimental work on herd eradication of agalactiae mastitis has been continued and intensified. The final results have not as yet been assessed, but there is no doubt that eradication can be accomplished by this method. Whether it can be applied generally in the field, however, has still to be ascertained. The basis of the method is bacteriological examination of all cows in a herd and treatment of infected animals.

Daft Lamb Disease (Cortical Cerebellar Atrophy).—Further cases of this disease have been seen in pedigree flocks, and there is no doubt that the condition is inherited. It is a serious loss on the individual farm.

Contagious Pustular Dermatitis (Orf).—In previous years field trials with Orf vaccine have always given a number of flocks where the vaccine has not given efficient protection. In consequence, preliminary work with eight strains of Orf virus has been carried out to determine whether cross-immunity was absolute. There appears to be considerable variation in the antigenic value of the different strains examined. This work is being continued, using the chick embryo according to the method described by Goodpasture, Douglas, and Anderson (1938). The advantages of using the chick embryo rather than sheep are obvious. The bacteriology of the secondary invaders in Orf is also being carried out; so far a hæmolytic streptococcus has been isolated from each of forty sheep, together with a corynebacterium in some cases.

Bracken Poisoning.—An investigation into the histological changes in this disease has been attempted, but it has been very difficult to obtain cases not showing very extensive post-mortem change.

Therapeutic Trial of Diaminodiphenylsulphone in the Treatment of Johne's Disease.—The use of such drugs in the treatment of tuberculosis and leprosy suggested that it might be of value in Johne's disease. In the early stages of treatment the drug appeared to be of value in preventing scour, but as soon as treatment was stopped (14 days) the animals quickly deteriorated. Prolonged treatment was no more effective.

D.D.T. Dipping for the Control of Ticks and Blow-fly.—Following the good results of 1947 a further field trial was arranged to ascertain the efficiency of M.37 in controlling ticks in sheep and also to work out bath concentrations and fleece concentrations at

various intervals after the commencement of dipping. The results show that protection was complete for sheep passed through newly prepared baths with an initial D.D.T. concentration of 0.5 per cent. This protection quickly deteriorated owing to the removal of most of the D.D.T. from the bath by the first groups of sheep. It would appear that a better emulsion is needed before further trials are carried out.

Work on blow-fly dips (M.42) showed that the present field experiments were unsatisfactory owing to the interference of scouring sheep, an uncontrolled variable. The conclusion is reached that convincing experimental evidence of the greater efficiency of D.D.T. has still to be obtained.

Disease Survey of Sourhope Farm.—The work listed in the report of 1946-47 has been continued. Up to the present, abortion, barrenness, and helminthiasis have been established as the important disease problems of Sourhope. No evidence so far has been obtained that pine due to cobalt deficiency is present.

DEPARTMENT OF ADVISORY CHEMISTRY.

Soils.—The available phosphate and potassium were low in 20 per cent and 36 per cent respectively of the 6629 samples of farm soils examined, indicating that there has been no obvious impoverishment of the soils in plant nutrients during the last three years. Figures for acidity have shown a substantial improvement, only about 8 per cent of the samples being seriously acid; a further 50 per cent, however, also require lime in the near future. A short note on the particular importance of acidity for the beet crop was published.¹ Three liming experiments were carried out: (1) on a seriously acid soil ($\text{pH} = 4.7$), moderate and equivalent dressings of lime and ground limestone both doubled the yield of turnips; (2) on a less acid soil ($\text{pH} = 5.8$) neither limestone nor waste carbonate (paper works) increased the turnip crop; (3) on a soil of $\text{pH} 6.0$ a dressing of 14 cwt./acre CaO as limestone increased the yields of beet and sugar by 1.4 tons and 5 cwt. respectively, but larger dressings of limestone or waste carbonate were not so effective.

Experiments were carried out at five centres to compare the effects of superphosphate (at two levels), silico-phosphate, high and medium-grade slags, four on turnips and one on barley (residual values after roots). Significant responses were obtained in every case, and there were many striking increases in yield—e.g., $7\frac{1}{2}$ tons roots from 56 lb. P_2O_5 . The differences between fertilisers were irregular, but in four of the five cases the best percentage recovery of phosphorus was obtained from the lower-dressing of superphosphate.

Plant Materials.—Samples of dried grass have shown great variation in quality, the range in crude protein being from 7 to

30 per cent, the average 12·3 per cent. There seems to be a strong case for including this product in the Fertilisers and Feeding Stuffs Act. There has been a marked improvement in the quality of the silages received for analysis. Figures for seeds-hay have again shown the low protein figure of about 6 per cent previously reported,² but this was increased by from 13 to 54 per cent in a series of trials in which top-dressings of nitrogen were given two or three weeks before cutting. Studies of the composition of the grasses in complementary grazing and of various plant leaves with deficiency symptoms have been continued. It has been shown that, of different undersown crops, clover makes the largest contribution of organic nitrogen to the soil.

Animal Nutrition.—Investigations on the digestibility of various samples of hay have been started—little difference was found between tripod- and mow-dried samples. When cut in July bracken had a nutritive value comparable to that of seeds-hay, but when cut in August its food value was extremely low. An examination has been made on the cyanogenetic compounds in bracken at different stages of growth; a cyanide balance experiment has also been carried out with a bullock in the investigation on bracken poisoning. Work on methods of determining β -carotene has been continued.

REFERENCES.

- ¹ Smith, A. M.—Sugar Beet and Soil Acidity. *British Sugar Beet Review*, 1948, 17, 71.
- ² Smith A. M., and Comrie, A.—The Composition of Lothian's Seeds-Hay. *Scottish Agriculture*, 1948, 28, 67.

THE NORTH OF SCOTLAND COLLEGE OF AGRICULTURE.

ABERDEEN.

Oat Varieties.—The newer oat varieties, such as Steel (or Sun II.) and Minor from the plant-breeding stations in Scandinavia, were compared with the older and better-known ones—Victory, Eagle, Star, and Sun. Minor, an early short-strawed oat suited to soils with a high organic matter content, gave a higher yield of grain than all the other varieties, with the exception of Eagle. Eagle yielded the same grain as Minor and most straw of all the varieties, but it is later than most. The order of ripening in the trials was first Minor, then Steel, Star and Sun, Eagle, and last Victory. There was no lodging of any of the varieties.

Nitrogen for Minor Oats.—Observations were made on the effect of applying sulphate of ammonia in amounts in excess of the usual practice. A yield of 30 cwt. was obtained with the applica-

tion of 1 cwt. sulphate of ammonia per acre and 39 cwt. with the application of 3 cwt. in three doses of 1 cwt. at ten-day intervals. The yield was intermediate with an application of 2 cwt. sulphate of ammonia in two doses of 1 cwt. There was also an increase in the yield of straw and, despite the wet summer of 1948, there was no lodging.

Linseed Varieties.—Of all the varieties tried Redwing alone ripened evenly and well. Bison, Royal, and Dutch White Flowered were too late.

Time of Sowing Roots.—The trials again emphasised the importance of sowing Swedes and Yellow Turnips before the middle of May in the North-East of Scotland. Generally speaking, this crop is sown much too late.

The best yield of Sugar Beet was got by sowing early in April. The fewest bolters were observed in Klein AA., Garton's C., and Kuhn R. There were three times as many in Sharpe's Klein E. and Foreign Klein E., and six times as many in Foreign Helleshog.

Kale Cultivation.—Marrow-stem Kale was sown (a) broadcast at 10 lb. per acre with a yield of 12 tons; (b) on 27-in. ridges and singled with a yield of 16 tons; (c) on ridges and unsingled with a yield of 20 tons; and (d) on ridges and roughly gapped with a yield of 20 tons per acre. The analysis of the larger singled plants was remarkably close to that of the more slender plants grown from broadcast seed. It has been observed in previous experiments that the proportion of fibre rises and that of the protein falls when the total weight of crop exceeds 25 to 30 tons per acre. The value of this crop cannot therefore be judged entirely by its weight.

Harvesting Kale for Silage.—Marrow-stem Kale was grown with a view to making silage to provide succulence and protein in late winter for dairy cows. Harvesting was done by means of a power-driven binder. The handling of the sheaves was simple compared with the handling of loose kale. The sheaves were chopped and blown (a) into an outside clamp against a building and covered with straw and corrugated iron sheets, and (b) into an ordinary pit silo and covered lightly with earth. There was practically no wastage in the pit silo and only a little more in the clamp.

Grass for Winter Keep for Blackface Hogs.—At Glensaugh in Kincardineshire, the Hill Experimental Station of the College, 37 acres of heather-covered hill were ploughed and directly seeded with a grass and clover seeds mixture in 1944. The main objective was to provide winter keep for the stock ewe hogs. In summer, therefore, the area is managed to encourage the maximum stand of leafy sward in mid-October. It is therefore grazed by cattle and suitably rested. In 1948, its fifth winter, it carried two hogs per acre and did them well—almost as well as ordinary clean low-

ground winter grazing did the other half of the hogs at the rate of two hogs to $2\frac{1}{2}$ acres. Experimental plots on this area at Glensaugh show the importance in winter grass of persistent leafiness. This may be a genetic quality, as in the late-bred strains of grasses such as S.23 Ryegrass, or it may be induced with great benefit in the early commercial (so called) strains such as Perennial Ryegrass and Danish Cocksfoot, by means of adequate fertility and suitable management. The most difficult time for winter keep from grass is before normal growth starts in the spring. It is then that an early strain which can be induced to start still earlier and a late one which can be induced to grow longer are invaluable.

Feeding Value of Heather.—70 per cent of Scotland's land area is dominated by heather. Investigations have been started to get knowledge of the growth periods of heather and the effects of fertilising on quantity and quality.

Weed Control.—Sulphuric acid in 1948 was still extensively used, despite its corrosive nature, because of its price and the wide range of weeds which it kills. Use of the new "hormone" weedkillers is on the increase and these are very effective against a limited range of weeds. An experiment where the various weedkillers were applied to a wheat crop relatively free of weeds resulted in later ripening and a reduced yield where sulphuric acid was used and a normal yield where a "hormone" type and a D.N.O.C. type were used. There was evidence in field observations and plot trials that in 1948 the application of the "hormone" type 2, 4-D reduced the yield in Star oats. The behaviour of these "hormone" materials under all conditions in the College area requires much further study.

Crop Diseases and Control.—"Eyespot" in wheat and barley was widespread in 1948. Oats are not usually attacked and should be used as an alternative crop where the danger exists. "Loose Smut" is prevalent in the newer barley varieties from Scandinavia. The Jensen hot-water method of treatment was used to give a clean sample of grain which can be used as a nucleus from which to grow seed stocks. Trials with the variety of oat S.171 showed it to appear resistant to Loose and Covered Smut and to yield well when grown alongside the susceptible small oat *Avena strigosa* on the machair land of the Outer Hebrides. Further trials will be made to see whether it remains resistant.

"Grey Speck" in oats was common in 1948. Treatment with manganese sulphate gave good results. The disease is due to excessive liming and a deficiency of manganese.

"Potato Blight" outbreaks were forecast by a study of meteorological conditions and protective spraying advised.

"Rot" in potatoes in 1948 was thought to be due largely to early digging and dressing too soon after digging.

"Chocolate Spot" in beans was much greater in trials where the seed was not inoculated with the nodule bacteria.

"Blind seed" disease is the cause of poor germination of Perennial Ryegrass grown in areas where the weather at flowering time is cool and wet.

Crop Pests and Control.—The Turnip Root Fly caused severe losses in the turnip and swede crops in the north and west of the College area. No method of control by cultivation has been found and chemical control so far is too costly, but further experiments are under way.

Greenflies (Aphids), especially those concerned with the transmission of virus diseases of potatoes, continue to be found only in small numbers in the North and North-East of Scotland compared with other areas.

Caterpillars of the Winter Moth defoliated many acres of oak, especially in certain areas of Morayshire.

The economic importance of the caterpillars of the Large White Butterfly in the damage caused to cabbage and turnip crops in the northern and western islands is decreasing apparently through a natural balance becoming established between the insect and its foes.

Copper Deficiency in Cattle.—The widespread occurrence in the North of Scotland of a pining condition of young cattle has been shown to be due to a deficiency of copper in the animal. Experiments by the College on different farms have shown that the giving of even small amounts of copper can bring about a difference in body-weight of about 160 lb. within four months compared with animals which have received no copper. The condition is seen in the late spring and summer when the animals are on pasture and is most common in young calves suckling cows on these pastures. Affected animals rarely scour, but the coat becomes rough, and in the case of black animals quickly turns grey round the eyes and face. The affected animals have a characteristic stilted gait, which is probably the first sign of the disease.

The condition can be cured and prevented by drenching with copper sulphate solution at the rate of 5 grams per month. Experiments are still in progress, however, on the best method of preventing the condition, and the application of copper sulphate to the pasture may prove the most practical manner of controlling the disorder. It is, however, too early to lay down definite methods of treatment, and it must be emphasised that the use of copper sulphate either as a pasture dressing or as a drench should be considered only under veterinary guidance.

Black Disease in Sheep.—Experiments in Caithness with nearly five thousand sheep showed that Black Disease could be effectively controlled, and the losses from this disease reduced to less than 1 per cent, by the use of a vaccine and by regular dosing with carbon tetrachloride. A survey of cattle in Black Disease areas has shown that 36 per cent of them are affected with Liver Fluke, although no obvious effects are to be seen in the animal's condition.

It is recommended that more attention should be paid to the control of Liver Fluke in cattle and sheep in these areas in which the disease occurs, and it has been shown by experiment that if a routine system of treatment is used the disease can be very effectively controlled. Black Disease has been reproduced for the first time by feeding young liver flukes to guinea pigs in which an artificial population of the spores of *Cl. oedematiens* had been built up.

Sheep Tick Control.—It has been found that hogs reared on a tick-infested hill lose their immunity during an absence of six months and it is essential to dip before return to the original hill so that immunisation may take place gradually. It has also been shown by critical experiment that pregnant gimmers not immunised by acclimatisation will abort and often die when exposed to tick infestation. D.D.T. in freshly prepared emulsions has given by far the best results in tick control, but unfortunately no emulsion containing 20 to 25 per cent D.D.T. has been found which will withstand the normal conditions of farm storage in the College area. Investigations are proceeding.

The Greyface Ewe.—The value of the Half-bred out of the Cheviot ewe is well established. The value of the Greyface out of the Blackface ewe is not so well known. It is believed that exact data should be available showing the potentialities of this cross. The parent Blackface ewe is available in great numbers in both Scotland and North England. An experiment is in progress to get this data, using both the Border Leicester and the Wensleydale rams to get the Greyface. A Suffolk ram is used in both crosses.

"Broken Mouth" in Sheep.—An investigation is in progress into the eruption and loss of the incisor teeth of the sheep, with special reference to early breaking in the mouth in the Blackface breed.

Bees.—The survey of flowering periods of most of the more usual flowers of the area was continued, and many flowering curves were drawn and compared with curves for some previous years. Mathematical investigations were made into some aspects of the relationship between weather factors and these times of flowering (or "phenological" events).

Photographic standards were prepared, and calibrated, for the estimation of quantities of bees on combs, for research purposes, and a wire grid was constructed for rapid estimation of numbers of brood cells and quantities of pollen. Studies of the normal course of colonies of bees throughout the year were continued and the quantities of bees, brood, stores, and pollen in colonies measured throughout winter as well as summer seasons. Estimations were made of the length of life of the bee and of the dates of death of over-wintered bees.

Some manipulative methods of treatment of acarine disease met with considerable success. The winter of 1947-48 was not

so bad a one for nosema disease as the 1946-47 winter had been in the area.

Electrical heating of nuclei showed considerable promise.

Poultry Houses.—Study was primarily focused on the design of a simple colony house suitable for use by the general farmer and such a house, incorporating the findings of this study, is to be made for field trials.

Pig Housing.—The unsatisfactory results obtained in rearing winter litters have been investigated, and housing suitable for outdoor and indoor rearing has been designed. The former is an ark house of the apex type made to retain heat and to eliminate draughts, while for indoor rearing a house built on the lines of the "cottars' piggery" but arranged for large-scale production and economy in labour is now suggested.

Potato Storage Houses.—An investigation of the indoor storage of potatoes as practised in the College area has been carried out, and designs incorporating the findings of this investigation have been made.

Profitability of Farming.—Financial accounts were analysed in order to study the profitability of the main farming types and the effect of changing conditions on each type. It was found that in the crop year 1946-47 there was an increase in the profit for all farming types compared with that in 1945-46. Dairy farming showed the highest average profits followed by arable feeding farming, and the latter showed the greater increase between the two years. Breeding and rearing farms showed a lower increase and a lower average profit.

Costs of Production.—Production costs are studied both by the complete cost and by the enterprise cost methods, and it is now possible to follow the effect of changes in particular items of cost on the total cost of certain products by means of detailed cost structure analysis.

Labour Utilisation.—This study is being carried out over a prolonged period with a view to arriving at some definite figures regarding the economics of man and mechanical labour.

Work Simplification.—This aspect of farm management study, hitherto unexamined, has been undertaken with special reference to silage-making.

THE WEST OF SCOTLAND AGRICULTURAL COLLEGE.

SUMMARY OF WORK OF THE MILK UTILISATION DEPARTMENT DURING THE YEAR ENDED 31ST DECEMBER 1948.

Routine Advisory Work.—This work was continued in farm and creamery visits to investigate the causes of milk-producing and milk-processing difficulties. One very unusual and interesting case was encountered in a large pasteurising dairy in Glasgow. At irregular intervals the plate heater equipment became totally blocked up with coagulated milk at some stage during the day's routine. Thorough examination of the farm milk supplies entering the dairy failed to show any chemical abnormality which would predispose the milk to heat coagulation.

The introduction of a new testing technique in the creamery laboratory actually anticipated and forecast the final cessation of milk flow due to heat coagulation.

The use of a milk-can which had previously held calcium chloride brine for milk resulted in the heat stability of the milk being seriously upset, with the result that the casein of the milk coagulated during the heat treatment of the milk.

Cheese Starter Problems.—Work on cheese starters continued throughout 1948, and a number of new active cultures were produced in the laboratory and tried out with success under commercial creamery conditions.

The examination of a large number of final readings in our vitality tests suggested a somewhat lowering in starter activity when the cultures are grown in milk in the months of May and August. It is suggested that the young grass in May and the aftermath growth in August may render the milk more difficult to ferment.

The use of a milk supply from a farm where the herd was receiving massive penicillin treatment resulted in the complete failure of a large number of cultures to coagulate the milk overnight. It is suggested that the widespread treatment of milk cows with penicillin may result in the cheesemaking creameries receiving milk with a reaction antagonistic to the growth of the cheese starter organisms. The cheesemaking industry in Scotland through the manufacturing season of 1948 encountered little or no difficulty with "slowness."

SUMMARY OF WORK OF THE ANIMAL HUSBANDRY DEPARTMENT DURING THE YEAR ENDED 31ST DECEMBER 1948.

GENERAL.

The Controlled Grazing of Grassland.—A new system of grazing animals on pasture land has been elaborated. The system renders

unnecessary the confinement of animals within stock-proof enclosures, eliminates the need for stockmen's dogs, controls the grazing of pastures at will and improves the stock-carrying capacity of grazings. The method has been used successfully on the tracks of racecourses, stretches of roadside, policies, and grass areas in vegetable allotments. On larger areas the grazing of fifty animals can be changed expeditiously by moving the two end stakes of a main 300-yard cable wire to which the individual tethers are attached a distance of 6 yards.

BEEF CATTLE.

Fertility of Hill Cattle.—The "complete" mineral mixture used in experiments in 1945 and 1946, in which the infertile condition of Perthshire hill cattle herds was greatly improved, has been fractionated and the animals on different grazings are receiving one of the elements admixed with common salt (NaCl) purified for the purpose. The results should demonstrate whether phosphorus, calcium, cobalt, or copper is the necessary element for complete fertility in cows on hill grazings.

DAIRY CATTLE.

Effect of Nutrition on the Health and Milk Yield of Dairy Cows and on the Health and Growth of their Progeny.—Three winter-feeding experiments have been completed. The results show that the traditional methods of winter feeding using hay, oat straw, roots and purchased concentrates, adversely affect the health of the young calves born during the winter period. The mortality rate decreases, the incidence, intensity and duration of "scouring" is lessened, and the general health of the calves is improved when the cows are stall-fed large quantities of grass silage or dried grass.

Data were also recorded on the effect of feeding green foods on the carotenoid and vitamin O content of the blood of cows, their colostrum and milk, and of the blood of their calves. A complete report has been prepared.

Surveys of the Effect of Herd Nutrition on Calf Mortality.—(a) Data for the period 1932-47 have been collected from several farms where accurate records have been kept.

The average annual heifer calf mortality was 11.1 per cent, but mortality was higher in herds fed according to the traditional winter practice than in herds stall-fed large amounts of grass silage and/or dried grass.

(b) With the assistance of the County Organisers a herd survey of nutritional practice and calf mortality has been made in forty-two herds in the West of Scotland. The data for the first year of the survey have now been collected and analysed. The herds were divided into three groups: (1) dairy and beef herds, outwintered; (2) dairy herds stall-fed hay, oat straw, roots, concentrates, and

large amounts of green foods such as grass silage and/or dried grass; (3) dairy herds fed according to traditional practice, with or without roots. The average mortality during 1947-48 was low compared with previously recorded data, but mortality was much higher in the group (3) herds, longevity of the cows was least in group (3) herds, and greatest in group (1) herds.

The Effect of Feeding Iodinated Protein to Dairy Cows on the Yield and Composition of the Milk.—The Animal Husbandry Department has been co-operating with the Ministry of Agriculture in the execution of a large-scale experiment on feeding iodinated protein to milk cows. The feeding and weighing of the milk have been carried out by the Farm Department, while the Dairy Research Department has analysed weekly samples of milk for fat and "solids-not-fat." The cows in four groups of four cows each have been fed three levels of iodinated casein, 5, 4, and 3 lb. per head, while one cow in each group has served as control.

An examination of the results at Auchincruive suggests that an increase in milk production has resulted from the treatment, but there appears to be little effect on the fat and "solids-not-fat" content of the milk.

The Effect of Feeding Surplus Colostrum to Calves on their Well-being during the first Month of Life.—Two experiments conducted during the year show that surplus colostrum although fed intermittently with whole milk had no significant effect on the rate of live-weight gain and no adverse effect on the health and general condition of the animals. Contrary to traditional thought it did not cause "scouring."

The feeding of surplus colostrum is of considerable economic importance and would save the consumption on the farm of a considerable volume of liquid milk now fed to calves.

Requirements of Calves fed Separated Milk for Additional Dietary Factors.—Four calves born in June after being fed their mothers' milk for 1-7 days received a diet of separated milk unsupplemented by other foods. To avoid consumption of bedding litter the calves were confined to concrete stalls. All four calves succumbed after 12-20 days. Eight other calves fed the same diet, plus various fractions of rumen liquor filtrates, were all alive on the 20th day and were graded in Ayr market.

The effect of rumen liquor wore off in successive batches of calves till in September the longevity of the rumen liquor treated calves was only slightly greater than the controls.

SHEEP.

Cobalt and Copper Deficient Hill Grazing Areas.—Work on this problem was continued during the summer of 1948. The live-weight increase response elicited by administering 100 mg. Co plus

50-100 mg. Cu to the lambs at three weekly intervals was studied on eight grazings where the results of this treatment were available for previous years (1944-47). The complete records show that while a marked response in live-weight increase to the treatment may be obtained in one year the response may be negligible or absent the following year. It thus becomes impossible to determine whether a grazing is mineral deficient or not from consideration of the results obtained in any one year. Continued study over a period of at least three years may be necessary before tentative conclusions may be drawn.

The Effect of Season on Lamb Growth Rate.—In this investigation it was shown that the growth-rate of the lambs in 1948 was greater than in any previous season between 1943 and 1947. The over-all average of eight grazings showed that on 15th August the lambs were 11 lb. heavier than in 1947 and 1.5 lb. heavier than in 1946. In one extreme case the lambs on one grazing in Dumfriesshire were 21 lb. heavier in 1948 compared with 1947 and 3 lb. heavier than in 1946.

"Broken Mouth" of Hill Ewes.—There is some evidence that the condition of broken mouths in hill ewes may be inherited, and large-scale experiments have been planned to elucidate this point. At the same time the effect of nutrition in precipitating the condition is also being investigated. In two affected Nithsdale flocks 400 ewes have been marked and 200 each received one million I.U. vitamin D after mating. The effect of this treatment on the incidence of the condition in the two groups of animals is being studied.

Control of the Sheep Tick on Hill Lambs.—In conjunction with the Zoological Department 100 lambs in hill flocks were smeared at birth round the head and on their under-surface with dibutyl-phthalate experimental salves. The final observations on the groups in September showed that the treated animals had maintained the 5 to 6 lb. extra gain in weight which they had already established in June after the tick season was over. Over 90 per cent of the treated animals were recovered at the final weighing, but the loss in the untreated group was almost 30 per cent.

Control of Sheep Maggots.—Among the 50 clipped ewes and hogs sprayed once in June with either Stoddart's Anti-strike solution or a D.D.T. preparation no strikes occurred in either group till September. By this time 12 of the 18 animals in the untreated group had shown the presence of sheep maggots in the fleece. In September, strikes began to appear in both treated groups as well, and the experiment terminated at the end of the month when all animals were dipped in accordance with the Compulsory Dipping Regulations. Both preparations appeared to be useful for the prevention of strike over a period of two and a half months when the maggot fly was most troublesome.

ROYAL (DICK) VETERINARY COLLEGE.

EDINBURGH.

Department of Physiology.—A study of electro-cardiograms of the horse has been continued. The effect of various drugs on intestinal movement in horses is also being investigated.

Department of Pathology.—The incidence and nature of neoplasms in domesticated animals, with particular reference to those occurring in the skin of dogs, is being investigated.

Department of Bacteriology.—Research work at present in progress includes a study of Actinomyces infections in dogs, a preliminary report of which is in the press ; an investigation of the distribution and characters of the organisms of the genus Proteus in domestic animals ; and, in collaboration with the Clinical Department, an investigation into Leptospirosis in dogs, with particular reference to *L. canicola*.

Clinical Department.—Research work in connection with the diagnosis and treatment of diseases of the domesticated animals has been continued by the members of the staff of the Clinical Department.

MILK RECORDS.

By JAMES A. PATERSON, Superintendent-Secretary,
The Scottish Milk Records Association.

SYSTEMATIC Milk Recording in Scotland was continued in 1948 under the direction of the Scottish Milk Records Association and on the same lines as in previous years.

While the control of recording was, as formerly, vested in the Association, Scotland was, for convenience of organisation, subdivided into local Milk Recording Societies, who accepted responsibility for local finance and for the "layout" of the recorders' circuits within their own particular areas. The following is a list of the local Societies which operated in 1948, with the name and address of the Secretary of each :—

Name of Society.	Secretary.
Arran	Mr J. M'Alister, Bellevue, Sliddery.
South Ayrshire (14 circuits)	Mr E. A. Bell, 2 Miller Road, Ayr.
Caithness	Mr J. Paterson, 50 Princes Street, Thurso.
Central Scotland (13 circuits)	Mr Arthur Gilmour, C.A., 23 Silvergrove Street, Glasgow.
Dumbartonshire (3 circuits)	Mr R. Bilsland, 35 Wylie Avenue, Alexandria.
Dumfriesshire (11 circuits)	Messrs Henderson & Mackay, Solicitors, Lockerbie.
Lothians and Border (5 circuits)	Messrs Inglis, Orr & Bruce, W.S., 19A Hill Street, Edinburgh.
Fife (5 circuits) . . .	Mr J. W. Smith, Commercial Bank, Thornton.
Highland (3 circuits) .	Mr Angus Macbeath, 32 Church Street, Inverness.
Kintyre (2 circuits) .	Mr J. M. Macdonald, Largie Estate Office, Tayinloan, Argyll.
Lesmahagow (4 circuits) .	Mr T. M'Kail, British Linen Bank, Lesmahagow.
Machars (5 circuits) .	Mr J. Gordon, Black Bull Hotel, Newton Stewart.
North Ayrshire (12 circuits)	Mr G. F. F. Smith, Union Bank, Kilmarnock.
North of Scotland (9 circuits)	Mr R. C. May, 77 Crown Street, Aberdeen.
Renfrew and Bute (3 circuits)	Mr Thomas Hunter, 35 High Street, Paisley.
Rhins of Galloway (7 circuits)	Mr Alex. D. Forster, 2 Castle Street, Stranraer.
Stewartry (9 circuits) .	Mr Patrick Gifford, Solicitor, Castle Douglas.

The Association in 1948 consisted of the following representatives from local Milk Recording Societies, Breed Societies, Agricultural

Colleges, Research Institutes, Milk Marketing Boards, the Department of Agriculture for Scotland, and certain co-opted members :—

Name and Address.	Body Represented.
Mr James Currie, Drumadoon, Shiskine . Mr D. Paterson, Lagg, Dunure . Mr J. M. Stevenson, Bankend, Cumnock Mr J. Baird, Birnieknowe, Auchinleck . Mr T. Black, Balig, Ayr . Mr J. Templeton, Willoxton, Mauchline . Mr R. H. U. Stevenson, Corseclays, Ballantrae	Arran Milk Recording Society.
Mr R. W. Montgomerie, Lessnessock, Ochiltree Mr R. Smith, Dumnymuck, Girvan . Mr R. Woodburn, Borland, Hollybush . Mr W. Gray, Park, Maybole . Mr T. M. M'Quaker, Brae of Auchendrane, by Ayr	South Ayrshire Milk Recording Society.
Mr R. Semple, Genoch, by Ayr . Mr W. Ronaldson, Westerseat, Wick .	Caithness Milk Recording Society.
Mr T. Pettigrew, Hairmyres, East Kilbride Mr Robert Lohar, Greenlees, Cambuslang Mr Wm. M'Lachlan, East Crookedstone, Quarter Mr R. Pate, Muirland, Kirkmuirhill . Mr David Howie, Hillend, Crossford, Carluke Dr Blackwood, Hill of Kilnecadzow, Carluke	Central Scotland Milk Recording Society.
Mr M. Bowie, Balmuildy, Maryhill, Glasgow Mr W. Bankier, Woodilee, Lenzie . Mr Wm. Bryson, Parkhead, Linlithgow . Mr T. Johnstone, Standalane, Falkirk . Major D. C. Bowser, Argaty, Doune Mr Robert Watt, Milligs Farm, Helensburgh	Dumbartonshire Milk Recording Society.
Mr George P. Ross, Kilmaronock House, by Alexandria Mr Andrew Rankin, High Mains, Gartocharn Mr Alex. Kirkpatrick, Barr, Sanquhar . Mr John Harvey, Nether Keir, Auldgirth Mr James Howie, Muirside, Dumfries Mr Wm. Sloan, Shawsmuir, Closeburn . Mr J. Young, Mouswald Grange, Dumfries	Dumfriesshire Milk Recording Society.
Mr D. Wyllie, Hannah, Annan . Mr J. Jamieson, Roundbush, Annan . Mr J. Shanks, Nutholm, Lockerbie Mr J. Woodburn, Quhytewoolen, Lockerbie Mr F. M. Kirkpatrick, Lochhouse, Beattock Mr Mungo Sloan, Uplands, Edinburgh Road, Dumfries	

Name and Address.	Body Represented.
Mr G. W. Lambie, Nether Pratis, Leven .	Fife Milk Recording Society.
Mr J. W. Clement, East Pitkierie, Anstruther	
Mr Wm. Young, Jun., Craigencait, Kinghorn	
Mr W. B. Black, Holton, Milnathort .	
Mr Alistair Munro, Dell of Inshes, Inverness	Highland Milk Recording Society.
Mr R. K. Forsyth, Kincorth, Forres .	
Mr Robert Millar, Sunnybrae, Campbeltown	Kintyre Milk Recording Society.
Mr Henry Barbour, Dalrioch, Campbeltown	
Mr T. B. M'Gregor, Lesserlinn, Lanark .	Lesmahagow Milk Recording Society.
Mr James A. Brown, Cormiston Towers, Biggar	
Mr James Ballantyne, Eastwood, Lesmahagow	
Mr R. L. Forrest, Mersington, Greenlaw .	
Mr D. S. Clark, Bellshiel, Duns .	Lothians and Border Milk Recording Society.
Mr R. Chalmers Watson, Fenton Barns, Drem	
Mr J. S. Dickson, Horsburgh Castle, Peebles	
Mr John Dick, St Cuthbert's Co-op. Assoc., 92 Fountainbridge, Edinburgh	
Mr John Wallace, Whitehills, Sorbie .	Machars Milk Recording Society.
Mr R. Allan, Broughton Skeog, Whitehorn	
Mr A. C. W. Brown, Prestrie, Whithorn	
Mr J. A. M'Geoch, Barnearnie, Kirkcowan	
Mr James Hair, South Lissens, Dalry .	North Ayrshire Milk Recording Society.
Mr John Cochran, Manrahead, Beith .	
Mr A. L. Howie, Oakholme, Dunlop .	
Mr David Smith, Kilmaurs Mains, Kilmaurs	
Mr R. Cuthbertson, Toponthank, Kilmarnock	
Mr James Howie, Eglinton Mains, Irvine	
Mr John Howie, Hillhouse, Kilmarnock .	
Mr William Bone, Auchencloigh, Galston	
Mr George Templeton, Carnell Home Farm, Hurlford	North of Scotland Milk Recording Society.
Mr Thomas Templeton, Hillhead, Sorn .	
Mr Thomas Young, Middleton, Dundee .	
Mr David Sinclair, North Loirston, Nigg	
Mr J. A. Stephen, Conglass, Inverurie .	
Mr R. G. Young, Arradoul Mains, Buckie	
Mr J. R. M'Caw, Waterybutts, Errol .	
Mr Joseph Argo, Harvieston, Stonehaven	
Mr Albert Watson, Suttie, Kintore .	

Name and Address.	Body Represented.
Sir W. Guy Shaw-Stewart, Bt., Ardgowan, Inverkip	Renfrew and Bute Milk Recording Society.
Mr Robert Howie, Flatterton, Greenock	
Mr Duncan M'Alister, Nether Ardrosca-dale, Rothesay	Rhins of Galloway Milk Recording Society.
Mr A. N. M'Caig, Challoch, Kirkcolum	
Mr J. M'Intyre, Logan Mains, Ardwell	
Mr John Forster, Mains of Larg, New Luce	
Mr J. H. Whyte, Kirkmabreck, Sandhead	
Mr J. H. Murray, Beoch, Stranraer	
Mr Alex. M'William, Colfin, Stranraer	Stewartry Milk Recording Society.
Mr Alex. M'Caig, Caldons Hill, Stranraer	
Mr J. G. M'Myn, Kirkhouse, Kirkbean, Dumfries	Ayrshire Cattle Herd-Book Society.
Capt. J. M. Gilmour, Chapelton, Borgue	
Mr J. B. Crawford, Caigton, Castle Douglas	
Mr F. J. Young, Congeith, Kirkgunzeon	
Mr John M'Gill, Hillowton, Castle Douglas	British Friesian Cattle Society.
Mr James Campbell, Enrick, Gatehouse-of-Fleet	
Mr J. G. Baird, Kirkchrist, Kirkcud-bright	Highland and Agricultural Society.
Mr R. Dunlop, Midkelton, Castle Douglas	
Col. Sir W. T. R. Houldsworth, Bt., Kirkbride, Maybole	Animal Diseases Research Association.
Mr A. W. Montgomerie, Dunure Mains, Ayr	
Mr James Howie, Muirside, Dumfries	Hannah Dairy Research Institute.
Mr Alex. Cochrane, Nether Craig, Kil-marnock	
Mr R. E. M'Kendrick, Cameron Farm, Windygates	Rowett Research Institute.
Mr W. J. Kilpatrick, Muirhouse, Kil-marnock	
Mr James Kilpatrick, Craigie Mains, Kil-marnock	West of Scotland Agricultural College.
Mr James Wither, Awhirk, Stranraer	
Mr W. Cassels Jack, Glenpark, Braxfield Road, Lanark	Edinburgh and East of Scotland College of Agriculture.
Dr Wm. Holmes, Hannah Dairy Research Institute, Kirkhill, Ayr	
Mr J. A. Crichton, M.A., B.Sc. (Agr.), Rowett Research Institute, Bucks-burn, Aberdeen	
Principal John Kirkwood, 6 Blythswood Square, Glasgow	
Mr John F. Niven, Mahaar, Kirkcolum	Edinburgh and East of Scotland College of Agriculture.
Mr John S. Stevenson, Balig, Ballantrae	
Dr A. D. Buchanan-Smith, House of Cockburn, Balerno	
Dr A. M. Smith, 13 George Square, Edinburgh	

Name and Address.	Body Represented.
Mr J. C. Grant, Veterinary Dept., Marischal College, Aberdeen	North of Scotland College of Agriculture.
Mr D. G. Dempster, College Office, 41½ Union Street, Aberdeen	
Sir George Wilson, Carbeth Home Farm, Balfon Station	Scottish Milk Marketing Board.
Mr William Young, Skerrington Mains, Hurlford	
Mr P. M. Pottie, Easter Dalziel, Dalcross	North of Scotland Milk Marketing Board.
Mr J. G. Singer, 38 Gray Street, Aberdeen	Aberdeen and District Milk Marketing Board.
One Representative	Department of Agriculture for Scotland.
Mr Allan Barr, Hobsland, Monkton	} Co-opted Members.
Dr H. P. Donald, Animal Breeding and Genetics Research Organisation, Glenbourne, S. Oswald Rd., Edin.	
Professor R. G. White, Animal Breeding and Genetics Research Organisation, Glenbourne, S. Oswald Rd., Edin.	
Mr Wm. Adair, Agricultural Editor, 'N.B. Agriculturist and Farming News,' Buchanan Street, Glasgow	

Chairman—Mr George W. Lambie.

The following were the principal members of the staff :—

Superintendent-Secretary—Mr James A. Paterson.

Assistant Superintendent—Mr Neil M'Ewan.

At the end of 1947 the number of herds officially recorded was 1745, and the total number of cows tested during that year was 91,039. During 1948, 344 applications were obtained from dairy farmers wishing to have their herds milk recorded ; and for various reasons, such as members disposing of their herds or removing from their farms, &c., there were 45 resignations. All the local Societies which operated in 1947 continued in 1948, and in order to accommodate the applicants for membership additional circuits were put into operation as follows :—

North Ayr	2
South Ayr	2
Central Scotland	2
Dumfries	1
Fife	1
Highland	1
Lesmahagow	1
Lothians	1
Machars	1
North of Scotland	2
Stewartry	1

15

The number of circuits operated in 1948 was thereby increased to 107. The number of herds officially recorded was 2044, with 102,907 cows under test throughout the year—an increase of 299 in herds and 11,868 in cows, and the greatest number of herds and cows tested and recorded in the history of the Association.

The following table shows for each Society or circuit the number of herds and the number of cows tested during the course of the year :—

Name of Society or Circuit.	No. of Herds.	No. of Cows Tested.	Name of Society or Circuit.	No. of Herds.	No. of Cows Tested.
Arran	24	517	Brought forward	808	36,017
Ayrshire (North)—			Dumfriesshire—		
No. 1	17	885	No. 1	22	1112
" 2	21	808	" 2	17	806
" 3	18	762	" 3	21	870
" 4	17	1035	" 4	20	1051
" 5	18	870	" 5	20	1284
" 6	17	667	" 6	20	834
" 7	17	857	" 7	19	810
" 8	19	845	" 8	19	964
" 9	18	906	" 9	19	970
" 10	19	769	" 10	18	936
" 11	17	514	" 11	20	1162
" 12	16	764			
Ayrshire (South)—			Fife—		
No. 1	17	844	No. 1	20	1394
" 2	18	905	" 2	18	1025
" 3	18	719	" 3	19	914
" 4	18	826	" 4	20	1213
" 5	17	726	" 5	19	668
" 6	17	679			
" 7	19	686	Highland—		
" 8	19	790	No. 1	19	859
" 9	19	746	" 2	20	737
" 10	19	1017	" 3	20	854
" 11	18	782			
" 12	16	784	Kintyre—		
" 13	16	862	No. 1	19	873
" 14	20	959	" 2	20	739
Caithness	13	522			
Central Scotland—			Lesmahagow—		
No. 1	18	800	No. 1	21	760
" 2	18	987	" 2	20	925
" 3	21	884	" 3	20	1025
" 4	19	1141	" 4	23	977
" 5	21	1004			
" 6	20	873	Lothians and Borders—		
" 7	17	846	No. 1	22	1053
" 8	20	788	" 2	21	958
" 9	23	836	" 3	24	938
" 10	18	992	" 4	20	724
" 11	19	819	" 5	21	909
" 12	19	748			
" 13	19	852	Machars—		
Dumbartonshire—			No. 1	19	1045
No. 1	16	653	" 2	15	754
" 2	19	1017	" 3	17	916
" 3	19	731	" 4	15	1127
			" 5	16	1005
Carry forward	808	36,017	Carry forward	1491	69,208

Name of Society or Circuit.	No. of Herds.	No. of Cows Tested.	Name of Society or Circuit.	No. of Herds.	No. of Cows Tested.
Brought forward .	1491	69,208	Brought forward .	1737	83,126
North of Scotland—			Rhins of Galloway—		
No. 1	21	1096	No. 1	16	1320
" 2	20	1382	" 2	19	1413
" 3	18	1225	" 3	15	1257
" 4	19	1308	" 4	17	1104
" 5	21	1139	" 5	18	1341
" 6	21	1073	" 6	18	1152
" 7	21	1353	" 7	20	1380
" 8	21	1218	Stewartry—		
" 9	19	1404	No. 1	17	1246
Renfrew and Bute—			" 2	20	887
No. 1	22	1016	" 3	22	1177
" 2	21	957	" 4	20	1198
" 3	22	747	" 5	21	1383
Carry forward .	1737	83,126	" 6	24	1316
			" 7	21	1271
			" 8	18	1162
			" 9	21	1174
			Total No.	2044	102,907

The increase both in herds and in cows tested and recorded was fairly evenly distributed throughout Scotland, and the following table shows the position in the various Counties :—

RECORDING ON A COUNTY BASIS.

County.	Milk Selling Herds.	Recorded Herds.	Percentage Recorded Herds.	Cows and Heifers in Milk Selling Herds —Dec. 1948. ¹	Cows and Heifers under Test —Dec. 1948.	Percentage of Recorded Cows in Milk Selling Herds.
Aberdeen	483	77	15.94	1,900	2,743	14.44
Argyll	271	41	15.11	8,500	953	11.20
Ayr	1639	465	28.37	38,000	12,858	33.84
Banff	101	7	6.93	4,300	385	8.95
Berwick	70	14	20.00	2,300	514	22.35
Bute	205	45	21.95	2,700	755	27.96
Caithness	101	13	12.87	2,000	314	15.70
Clackmannan	33	15	45.45	830	410	49.89
Dumfries	807	215	26.64	19,000	6,625	34.87
Dumbarton	202	58	28.71	4,700	1,516	32.26
Fife	332	60	18.07	8,600	2,042	23.74
Forfar (Angus)	206	52	25.24	6,200	1,964	31.68
Inverness	123	32	26.01	7,000	720	10.29
Kincardine	121	20	16.52	3,200	726	22.69
Kinross	46	8	17.40	1,300	303	23.31
Kirkcudbright	561	188	33.51	11,000	5,604	50.95
Lanark	1192	215	18.04	27,000	6,198	22.96
East Lothian	62	20	32.26	1,600	684	42.75
Midlothian	212	39	18.40	5,400	936	17.33
West Lothian	195	12	6.15	3,500	275	7.86
Moray	83	21	25.30	3,000	726	24.20
Nairn	21	7	33.33	660	215	32.58
Peebles	72	17	23.61	1,700	406	23.88
Perth	250	51	20.40	8,300	1,303	15.70
Renfrew	404	62	14.35	9,200	1,677	18.23
Ross	52	9	17.30	6,500	273	4.20
Roxburgh	57	16	28.07	2,500	366	14.24
Selkirk	28	7	25.00	1,000	210	21.00
Stirling	345	55	15.65	7,600	1,525	20.07
Sutherland	23	1	4.35	1,800	17	.82
Wigtown	650	202	31.08	13,000	6,126	47.12
Totals	8947	2044		231,390	59,359	
Averages			22.85			25.65

¹ Department of Agriculture for Scotland, 4th December Returns.

RECORDING STAFF.

During 1948 three Courses of Instruction were held at the West of Scotland Agricultural College, Auchincruive, and the Association were able, as a result of these courses, to approve of fifty applications for position as milk recorders. All these trainees ultimately entered the services of the Association, and during the course of the year 121 women and 22 men were employed for longer or shorter periods.

The system of maintaining a reserve pool of trained milk recorders at Headquarters, which system came into operation towards the end of 1947, has served a most useful purpose. Prior to the introduction of same there was a considerable "wastage" of trained personnel, as under the old system successful trainees were listed for appointment, and it often happened, when there was a long waiting period, that trainees took up other work, which they were not prepared to give up when vacancies did occur. With the reserve pool the waiting period has been very considerably reduced, with the result that, as previously stated, all the 1948 trainees were ultimately appointed to milk recording circuits. It has also been possible to provide interim recorders in cases of emergency, at very short notice, whereas prior to the introduction of the pool system there was often a lapse of three or four days before an interim could be placed on a circuit.

SUPERVISORY SERVICE.

During 1948 two recorders were promoted to the Supervisory Staff, bringing the number of supervisors to eight. It is the intention of the Association to make further appointments, their aim being that there should be, on the average, one supervisor for each ten recorders. This supervisory service is proving one of the best features of the Association's scheme. It has led to a very marked improvement in the standard of the recorders' work, and the system of the retesting of recorders' butter-fat samples has increased to a remarkable extent the accuracy of that work.

CHECK TESTING.

The system of surprise check testing has been continued, and during the course of the year 1002 check tests were carried out by recorders. In no case did the average yield of milk of a herd show any abnormal variation as compared with the recorder's ordinary test of the previous day, nor were there any cases of abnormal variations in the average butter-fat percentage. In addition, a

number of check tests were carried out by the supervisors, mainly at the request of members who were dissatisfied with the butter-fat percentage shown by the milk recorder, and in no case was there any abnormal variation.

There has also been introduced during the year a system whereby abnormally high-yielding cows, both as regards milk and butter fat, are retested by a supervisor very shortly after the recorder's visit.

MILK RECORDING DATA.

During 1948 it was possible, through the limited use of tabulating machines, to prepare some data on the 1947 yields. The work was confined to the extracting of information in regard to average yields on a breed basis, and the two tables which follow show what it was possible to do :—

AVERAGE YIELDS.

BASED ON LACTATIONS COMPLETED IN 1947.

Mixed and Others.—This refers to animals belonging to breeds not listed in the table and to animals whose breed cannot be identified.

Breed or Breed Type.	Average Yield Milk. (lb.)	Average Yield Butter Fat. (lb.)	Average Percentage Butter Fat.	Number of Cows.
Ayrshire (Pedigree) .	7285	287·269	3·94	22,221
Ayrshire (Non-Pedigree)	6515	251·446	3·86	26,600
Friesian (Pedigree) .	8758	315·376	3·60	1,400
Friesian (Non-Pedigree) .	7100	255·149	3·59	1,103
Guernsey	5229	237·408	4·54	119
Jersey	6332	313·923	4·96	128
Red Poll	6790	253·308	3·73	78
Mixed and Others .	6240	230·868	3·70	1,723
Over-All Total . . .	..	..	..	53,412
Over-All Average . .	6896	267·607	3·88	..

CLASSIFICATION OF BUTTER FAT RESULTS.

LACTATIONS COMPLETED IN 1947.

Mixed and Others.—This refers to animals belonging to breeds not listed in the table and to animals where the breed cannot be identified.

Breed or Breed Type.	NUMBER OF LACTATION RECORDS AND PER CENT OF TOTAL.						Average Percentage Fat.
	Under 3%.	3% and under 3.5%.	3.5% and under 4.0%.	4.0% and under 4.5%.	4.5% and under 5.0%.	5.0% and Over.	
Ayrshire (Pedigree)	65	1518	11,067	8,482	984	105	22,221
Percentage	0.3	6.9	49.6	38.2	4.5	0.5	100.0
Ayrshire (Non-Pedigree)	113	3015	14,546	7,949	845	132	26,600
Percentage	0.4	11.3	54.6	30.0	3.2	0.5	100.0
Friesian (Pedigree)	13	482	783	152	6	4	1,440
Percentage	0.9	33.4	54.5	10.5	0.4	0.3	100.0
Friesian (Non-Pedigree)	24	399	536	134	8	2	1,103
Percentage	2.2	36.1	48.6	12.2	0.7	0.2	100.0
Guernsey . . . . .	..	2	16	47	29	25	119
Percentage . . . . .	..	1.7	13.4	39.5	24.4	21.0	100.0
Jersey . . . . .	..	2	5	25	36	60	128
Percentage . . . . .	..	1.6	3.9	19.5	28.1	46.9	100.0
Red Poll	1	19	40	18	..	..	78
Percentage	1.3	24.3	51.3	23.1	..	..	100.0
Mixed and Others	29	389	910	330	53	12	1,723
Percentage	1.7	22.6	52.8	19.1	3.1	0.7	100.0
Total All Breeds	245	5826	27,903	17,137	1961	340	53,412
Percentage	0.4	10.9	52.3	32.1	3.7	0.6	100.0
Percentage							3.88

DEFINITIONS.

The milk records compiled by the Association are records of the estimated quantity of milk produced by each cow in a separate lactation and of the estimated percentage of milk fat contained in the milk.

The following further particulars concerning each record are also given wherever possible :—

- Name of cow.
- Byre number.
- Herd-book number.
- Tattoo markings.
- Sire of cow and herd-book number.
- Dam of cow and herd-book number.
- Date of birth.
- Date of calving preceding opening of record.
- Number of weeks in milk.
- Date of calving after record closed.

The milk yields are estimated in respect of quantity and milk-fat percentage from the results of systematic periodic tests by trained recorders. The recorders visit the farms for this purpose at intervals varying from 21 to 28 days, and each day of visit is regarded as the middle day of the period covered by the test. Milk records estimated in this way approximate closely to the actual milk yields.

METHOD OF RECORDING.

A distinctive feature of milk recording in Scotland is that the records are entirely the work of trained official recorders, who are the employees of the Association. Recorders have previously to undergo a special course of training in milk recording at the West of Scotland Agricultural College or other approved College of Agriculture. Only candidates of good character and good general education are selected to attend these courses, and all recorders before appointment must obtain a certificate of proficiency.

All dairy farmers taking advantage of the Association's scheme are arranged into local Milk Recording Societies, the Executive Committee of the Association having power to transfer members from one local Society to another in order to find accommodation for new applicants and at the same time avoid overlapping of recorders' circuits.

The official recorder arrives at the farm in the afternoon and is accommodated at the farm overnight. All cows giving milk in each herd are, as far as possible, included in the records. Each cow is clearly distinguished in the byre by a stall number on the wall immediately in front of and above the level of the cow, and cows are also indelibly tattooed on the ears with distinctive registered

tattoo markings. The cows are milked in the same rotation, evening and morning, on the occasion of the recorder's visit. The recorder weighs and samples the milk of each cow in the evening, noting the time at which each cow is milked, and enters the results in the corresponding columns in the byre sheet, taking up a position in the byre as near to the milkers as possible, so as to have them in full view, and as far as practicable receiving the milk direct from the milker at the cow's side. He or she again weighs and samples the milk of each cow in a similar manner in the morning and enters the results in the byre sheet. A mixed evening and morning proportionate sample of milk for each cow is then tested by the Gerber method for percentage of milk fat. The recorder is required to see that all milk samples and byre sheets are securely locked up overnight or during his or her absence. From the daily results the recorder calculates and completes the byre sheets, multiplying the yields by the exact number of days which have elapsed since the last test, but so calculating throughout that each day of the visit is regarded as the middle day of the period covered by the test. Special ready-reckoners are used to facilitate calculating and to ensure greater accuracy.

The byre sheets are written out in duplicate. The principal copies are posted at regular intervals to the office of the Association and the second copies left with the respective members. The recorder transfers the results from the extended byre sheets to the milk record book for the herd, each cow being assigned a separate page, at the top of which full particulars of the cows are entered, including the indelible tattoo marks on the animal. Visits of inspection are made to each recorder and to the members of local Societies at the different farms periodically throughout the year by members of the Association's staff, and reports thereon submitted to the Executive Committee.

During the year a number of surprise tests are made by the Association's staff in order to check the recorder's work. Retests of the milk samples already tested by the recorder are also carried out; for this purpose recorders are instructed to retain the milk samples each morning till 10 A.M.

All records are closed at the end of December, the current lactations being carried forward to the new books of the following year. Finally, summary sheets are written out in duplicate showing the total milk yield for each cow for the lactation or part lactation, with full particulars of the cow, dates of calving, &c. The principal copy of the summary sheet is posted to the Association's office with the record book and the second copy is left with the owner of the herd.

All record books and summary sheets are carefully revised, corrected in detail, and initialed in the Association's office during the next few months, the record books being returned later to the respective members, and the summary sheets retained and bound for future reference.

The milk records are next classified into three groups for cows and heifers respectively. Experience has confirmed the view that

the most useful comparison is obtained by reckoning the yields in terms of pure butter fat. Such a comparison takes into consideration both the quantity and the quality of the milk.

Cows with a milk record equivalent to not less than 280 lb. of butter fat, and heifers with a milk record equivalent to not less than 224 lb. of butter fat, are grouped in Class I. Cows and heifers with milk records of less than two-thirds of these amounts—viz., 186 and 149 lb. of butter fat respectively—are grouped in Class III.

The following short table shows the corresponding values of these yields in fairly good milk of 3·5 per cent milk fat :—

Class.	Yield of Butter Fat. (Lb.)	Corresponding Yield in Milk of 3·5 per cent Fat. (Gallons.)
Cows in Class I. . .	Not less than 280 . .	800
Heifers in Class I. . .	Not less than 224 . .	640
Cows in Class III. . .	Less than 186 . .	531
Heifers in Class III. . .	Less than 149 . .	426

All cows and heifers with milk yields falling between these limits come into Class II. Such animals naturally claim less attention than the good milkers or the obviously unprofitable animals. It should be noted, however, that Class II. includes a certain number of unclassifiable yields, as there are a number of cases where for various causes the results of a whole normal lactation cannot be obtained.

PROSPECTS FOR 1949.

The demand for milk recording still continues. All the Societies which operated in 1948 continued in 1949. A Society with one circuit has been formed in Islay, and to accommodate new members additional circuits have been brought into operation in the following Societies :—

Central Scotland . . .	2
Dumfries . . .	3
Fife . . .	1
Rhins of Galloway . . .	1
Stewartry . . .	1

As at 31st March, 116 circuits were in operation, with 2206 herds under test, an increase of 162 since the beginning of the year. An additional circuit is to be put into operation in the Renfrew and Bute Society at a fairly early date, and it is anticipated that further circuits will be required in other districts before the

end of the year. It is estimated that by 31st December something like 2400 herds will be under test, and the number of cows will be in the region of 120,000.

On the administrative side there has been a complete alteration in the method of checking the recorders' work and members' milk record books. In the past milk record books were called in at the end of each year and checked for accuracy. In so far as 1948 is concerned books are being called in as they can be dealt with, which means that the books are out of the members' hands only for a fairly short period. In so far as 1949 is concerned milk recorders forward to Headquarters, as soon as a cow has completed her lactation, a card which gives all the information in regard to name, pedigree, yield, &c., as it appears in the herd owners' milk record book. The yield is then checked from the byre sheets; necessary corrections are made and a note of the checked and certified yields sent to the supervisors, who call at the farms concerned, stamp the appropriate pages of the record book to show that the yields have been checked and are certified. The cards lodged by recorders are filed in herds and take the place of the summary sheet, which is usually made up at the end of the year for each herd. The advantages of this system are:—

- (a) Completed yields are checked and certified in a very short time after completion, and the herd owner can therefore quote these yields in the knowledge that they are correct.
- (b) It may be unnecessary to call in members' books at the end of the year.
- (c) The preparation of summary sheets at the end of the year, by recorders, will be dispensed with.

THE CEREAL AND OTHER CROPS OF SCOTLAND FOR 1948.

THE following comparison of the cereal and other crops of 1948 with those of the previous year has been prepared by the Secretary of the Society from answers to queries sent to leading agriculturists in different parts of the country.

The queries issued by the Secretary were in the following terms :—

1. What was the quantity, per imperial acre, and quality of grain and straw as compared with last year, of the following crops ? The quantity of each crop to be stated in bushels or cwts. What quantity of seed is generally sown per acre ?—(1) Wheat, (2) Barley, (3) Oats.
2. Did the harvest begin at the usual time, or did it begin before or after the usual time ? and if so, how long ?
3. What was the quantity, per imperial acre, and quality of the hay crop, as compared with last year, both as regards ryegrass and clover respectively ? The quantity to be stated in tons and cwts.
4. Was the meadow hay crop more or less productive than last year ?
5. What was the yield of the potato crop, per imperial acre, as compared with last year ? The quantity to be stated in tons and cwts. Was there any disease ? and if so, to what extent, and when did it commence ? Were any new varieties planted, and with what result ?
6. What was the weight of the turnip crop, per imperial acre, and the quality, as compared with last year ? The weight of the turnip crop to be stated in tons and cwts. How did the crop braird ? Was more than one sowing required ? and why ?
7. Were the crops injured by insects ? State the kinds of insects. Was the damage greater or less than usual ?
8. Were the crops injured by weeds ? State the kinds of weeds. Was the damage greater or less than usual ?
9. Were the pastures during the season of average growth and quality with last year ?
10. How did stock thrive on them ?
11. Have cattle and sheep been free from disease ?
12. What was the quality of the clip of wool, and was it over or under the average ?

From the answers received, the following notes and statistics have been compiled:—

EDINBURGH DISTRICT.

MID-LOTHIAN.—*Wheat*—46 bushels per acre; quality excellent, both of grain and straw; little spring wheat sown; seed sown, $3\frac{1}{2}$ bushels per acre. *Barley*—40 bushels per acre; what promised to be an excellent crop was severely damaged by gales of almost hurricane force just before harvest, and heavy losses were sustained from windshake; quality of grain and straw generally good; seed sown, $3\frac{1}{2}$ bushels per acre. *Oats*—52 bushels per acre; a good bulky crop, but the yield of grain was considerably reduced owing to the number of blind heads; quality very good; seed sown, 5 bushels per acre. *Harvest*—Cutting commenced about the usual time, but proved very troublesome owing to the sodden state of the ground following the August floods. Bettering conditions permitted the crops to be secured in excellent condition. *Hay*—Quite a good crop of well-secured hay; 45 cwt. per acre; continuous bad weather prevented the stacking of much of the crop from the rick until after harvest, with consequent damage. *Meadow Hay*—Much the same as last year, 30 cwt. per acre, but a great deal of it ruined by weather. *Potatoes*— $7\frac{1}{2}$ tons per acre; some bumper crops reported, but a number, particularly of the later varieties, rather disappointing; blight fairly widespread, but not severe. *Turnips*—Generally a good crop; 18 tons per acre; quality excellent; a certain amount of resowing was required, but generally the first sowing came quickly to the hoe. *Insects*—No abnormal damage. *Weeds*—A great deal of spraying for charlock was carried out with good effect; some damage sustained by wild tares in wheat and barley; an unwelcome newcomer to the county, eyespot, was also observed among wheat and barley. *Pastures*—Extra good; grass came away early, and the rains in July and early August kept up the growth. *Live Stock*—Both sheep and cattle thrive well and were generally free from disease. *Clip of Wool*—Quality good and was heavier than last year, but not up to the 1946 clip.

WEST LOTHIAN. *Wheat*—All autumn sown, about 40 bushels per acre; grain and straw of good quality; seed sown, 3 to 4 bushels per acre. *Barley*—36 to 48 bushels per acre; grain and straw both of good quality; seed sown, 3 to $3\frac{1}{2}$ bushels per acre. *Oats*—50 to 72 bushels per acre; grain and straw both of good quality; seed sown, 4 to 6 bushels per acre. *Harvest*—Cutting started in third week of August and finished first week of October; very bad weather for the cutting, but conditions improved and were very good when leading, and crop was secured in good condition; barley left for the combine was badly shaken. *Hay*—Average crop, 45 to 55 cwt. per acre; quality generally good. *Meadow Hay*—Little grown. *Potatoes*—Good crop; 7 to 10 tons per acre; some disease all over, but have kept better than was expected. *Turnips*—Better crop than last year; braided well; very little resowing. *Insects*—Very little damage, even less than usual. *Weeds*—Very little damage. *Pastures*—Good. *Live Stock*—Did not thrive owing to wet, cold weather, but were generally free from disease. *Clip of Wool*—Average.

EAST LOTHIAN (Upper). *Wheat*—44 to 56 bushels per acre; straw, 28 cwt. per acre; quality good, but barely up to last year; did not suffer so much from shake as barley; seed sown, $3\frac{1}{2}$ to 4 bushels; wheat and oats the best of the three cereals. *Barley*—32 to 52 bushels; straw, 25 cwt.

per acre ; looked like being a very big yield, but suffered tremendously from rain and floods on 12th August, but more damage done by gales on 16th August, which shook from 8 to 16 bushels per acre ; quality fair, rather better than previous year ; seed sown, $2\frac{1}{2}$ to 3 bushels per acre. *Oats*—68 to 88 bushels per acre ; straw, 23 cwt. per acre ; good crop ; did not suffer as much from shake as barley ; quality fairly good, but rather light in bushel weight ; seed sown, 5 to 6 bushels per acre. *Harvest*—Very protracted owing to very heavy rain ; started early in August and did not finish until beginning of October ; big loss by floods and wind on 12th and 16th August, especially on barley ; crop secured in fair condition owing to cool weather and good drying winds. *Hay*—Ryegrass crop better than previous year, $2\frac{1}{2}$ to 3 tons per acre ; secured in good condition ; quality good. *Meadow Hay*—None grown. *Potatoes*—Big crop, much bigger than last year ; 9 to 11 tons per acre ; some disease, but more harm done by the crop being waterlogged for so long ; long, slow harvest owing to labour shortage and broken weather. *Turnips*—Much bigger crop than previous year ; quality good ; 20 to 28 tons per acre ; braided well, and only one sowing required. *Insects*—No damage caused. *Weeds*—No damage. *Pastures*—Grazed well, better than last year. *Live Stock*—Throve better than last year and were generally free from disease. *Clip of Wool*—Good quality and average quantity.

EAST LoTHIAN (Lower). *Wheat*—Grain about 50 bushels ; straw, 3 tons per acre ; a very bulky crop, but damaged with too much rain at beginning of harvest ; quality of grain, medium to good ; seed sown, 3 bushels per acre. *Barley*—Promised to be a bumper crop, but damaged by rain and shaken by strong wind just before being cut ; yields varied from 72 bushels per acre, before the rain and wind, to 40 bushels per acre afterwards ; quality good ; straw, 30 cwt. per acre ; seed sown, 3 bushels per acre. *Oats*—Best crop for some years but, like the others, damaged by the weather at start of harvest ; yield, 10 to 12 cwt. of grain and 2 tons of straw per acre ; quality only fair ; seed sown, $3\frac{1}{2}$ to $5\frac{1}{2}$ bushels per acre, according to variety of oats sown. *Harvest*—Started during first week of August ; the 12th of August brought disaster to many of the low-lying parts of the county ; torrential rain brought the worst floods in living memory and did very serious damage ; after the floods a strong wind shook the uncut ripe crops, causing probably as much loss as the flooding ; after that everything dried up and the crop was secured in good condition. *Hay*—Only ryegrass hay grown ; crop good and secured in good order ; quality first-class ; crop about 3 tons per acre. *Meadow Hay*—None grown. *Potatoes*—A very much better crop than the previous year ; all varieties planted earlier than usual ; digging of earlies not much before the usual time, about the middle of June ; crop good ; lates lifted mostly in good condition ; not much disease except where flooding had taken place in August ; crops of 10 to 12 tons per acre quite common. *Turnips*—The crop was the best for a number of years ; very early sown in most cases, and quite a lot of bolters ; crop braided well and no second sowings were needed ; crops up to 30 tons per acre quite common ; a lot of kale now grown in this district and a very bulky crop this season. *Insects*—No damage. *Weeds*—Damage seemed less than usual ; more spraying of grain crops by weed-killing chemicals now taking place. *Pastures*—Just average. *Live Stock*—Did not thrive too well ; not enough sunshine ; summer much too cold for stock ; generally free from disease. *Wool Clip*—Was good and would be well over average.

BORDER DISTRICT.

BERWICKSHIRE (Lammermoor). *Wheat*—Sown in good time and in a good seed bed ; a poor crop of average quality ; seed sown, 4 bushels per acre. *Barley*—Sown at rate of 3 bushels per acre a fortnight earlier than usual and under perfect conditions ; a storm in August laid the crop badly ; yield below average and samples disappointing. *Oats*—Sown early at about 5 bushels per acre ; a good yield except where the August storm damaged the crop ; bushel weight of grain well below average ; straw, very poor quality. *Harvest*—Began generally in end of August and proceeded slowly among the twisted grain, but finished early in October. *Hay*—Ryegrass and clover, especially the latter, were badly laid by heavy rains in end of June and showery weather delayed the work. Hay stood far too long in the rick to be of good quality. *Meadow Hay*—A fair crop but of poor quality. *Potatoes*—Planted in good time but wet weather made subsequent cleaning operations difficult ; wet weather encouraged the onset of blight, but potatoes kept well in the pits ; no new varieties. *Turnips*—Mainly sown in good time, but many farmers lost their first break by fly and frost in early May ; singling very difficult owing to dirt and wet weather ; crop below average. *Insects*—Turnip flea beetle as usual, but damage to grain crops throughout the summer can be said to be less than usual. *Weeds*—Runches grew strongly among the turnip crop ; the prolonged dry spring enabled farmers to clean the land thoroughly, but wet weather later on encouraged the growth of wrack. *Pastures*—Came early until checked by frost ; fields were very green all summer, and made perfect grazing for sheep. *Live Stock*—Lambs thrive well, but cattle were slow in showing improvement until late summer ; ewes came to the lambing in good order, but abortion had already taken its toll, and “twin-sickness” further reduced their numbers ; the lambing can be classed as “very good.” Cattle were generally free from disease, except a few cases of Johnes disease ; grass tetany caused some loss among sucklers. *Clip of Wool*—Quality, average ; quantity, half-bred sheep, average ; hill sheep, below average.

ROXBURGHSHIRE. *Wheat*—Very variable, average about 38 bushels per acre ; mostly of very moderate quality ; straw average. *Barley*—A light crop generally, with grain of very poor quality ; a gale blew off many heads ; thin grain made a poor yield, running from 3 to 5 qrs. per acre ; seed sown, from 3 to 4 bushels per acre. *Oats*—A fair crop on the average, with grain on the lower farms not too well filled but definitely better, both in yield and quality, on higher, later farms ; yields varied from 40 to over 60 bushels ; seed sown, about 5 bushels per acre. *Harvest*—Ground was very soft and made cutting operations difficult for the earlier farms ; crops were got without undue loss on later farms ; weather was particularly favourable. *Hay*—About average or a little under and the condition very mixed. *Meadow Hay*—About average for yield, with good-quality hay early and poor late crop. *Potatoes*—Crop was big, in cases over 10 tons per acre, and with a minimum of disease. *Turnips*—A big crop, definitely over average ; the crop braided well and little or no resowing was required. *Insects*—Very little damage ; under average. *Weeds*—Very little damage ; considerably less than usual. *Pastures*—Good early on and continued so all season. *Live Stock*—Throve well and made considerable weight ; cattle and sheep were very free from disease, the most serious trouble being abortion in ewes. *Clip of Wool*—Quality over average and would weigh better than usual.

SELKIRKSHIRE. *Wheat*—Very little grown. *Barley*—Yield, 36 to 46 bushels per acre; a good standing crop; quality an improvement on last year; seed sown, $3\frac{1}{2}$ bushels per acre. *Oats*—Yield, 32 to 48 bushels per acre; a good average crop for the district; of excellent quality; seed sown, 5 to 6 bushels. *Harvest*—On account of the wet season was ten days later than usual; broken weather made the carting of the crop very difficult on account of the sodden state of the land, but ultimately the crop was secured in quite good order, and oats being well filled are threshing quite well. *Hay*—Ryegrass hay was a heavy crop, and, if cut early, was ricked in excellent condition, but the majority of the ricks could not be stacked until after harvest on account of the excessive rainfall. *Meadow Hay*—An excellent crop, but badly weathered before it could be secured. *Potatoes*—A bigger crop than usual and mostly lifted in good order; yield from 6 to 9 tons per acre; appear to be keeping well in pits. *Turnips*—The best crop for years, with very little finger-and-toe disease and practically no resowing. *Insects*—No damage reported. *Weeds*—Appeared to be more plentiful than usual, on account of lack of suitable labour for horse work. *Pastures*—Excellent. *Live Stock*—Throve very well, and cattle and sheep generally free from disease. *Clip of Wool*—Good quality; of average weight.

PEEBLESSHIRE. *Wheat*—Not extensively grown and the crops varied; grain was lighter than usual, from 36 to 44 bushels per acre. *Barley*—Was a most irregular crop; from 24 to 44 bushels per acre. *Oats*—Exceptionally heavy crop, from 36 to 64 bushels per acre, according to the situation of the farm. *Harvest*—In the early districts the crops were exceptionally heavy, and on account of the long spell of wet weather the crops were very badly laid and, after the weather dried up, cutting was a very serious problem, as tractors and binders were continually layering and seeds suffered considerably during cutting operations; some fields unable to be harvested at all owing to the softness of the ground; in many cases there was a big waste as the grain had become over-ripe. *Hay*—Good average crop, but the early districts got a very bad hay harvest because of the very wet weather; when the improvement in the weather did come there were some very good crops, but the ryegrass hay was over-ripe; average crop from 30 to 60 cwt. per acre. *Meadow Hay*—Just an average crop, but varied in quality according to when the crops were harvested; hay suffered generally throughout the county as the ricks stood out too long in the fields on account of the bad weather and because the oat crops ripened quicker than expected. *Potatoes*—Good average crops; quality excellent; average yield, 6 to 10 tons per acre. *Turnips*—Certain amount of resowing; braided well, but late frost completely nipped the young plants; notwithstanding, the yield per acre was considerably higher than it has been for several years. *Insects*—Damage slight. *Weeds*—About the usual damage. *Pastures*—Were very good and did not suffer from drought to the same extent as last year, but haugh fields were damaged by flooding; much grazing was lost until the pastures had cleaned sufficiently. *Live Stock*—Throve very well; hill lambs have been better this year than they have been for a year or two; cattle and sheep generally free from disease. *Wool Clip*—Considerably higher; quality good.

DUMFRIES DISTRICT.

DUMFRIES (Annandale). *Wheat*—20 cwt. per acre; acreage much the same as last year; seed sown, 4 bushels per acre; quality fair, rather spoiled by weather. *Barley*—21 cwt. per acre; similar acreage sown as

last year ; sample rather spoiled by weather ; seed sown, $2\frac{1}{2}$ to 3 bushels per acre. *Oats*—50 to 55 bushels per acre on better soils ; 35 to 40 bushels per acre on lighter soils ; acreage rather less than last year ; sample rather spoiled by unfavourable weather, although the weight per bushel would be rather better than last year. *Harvest*—Started third week in August ; progress was very slow owing to unfavourable weather and did not finish till second week of October ; weather kept cool and sprouting was not so general as usual in a bad harvest. *Hay*—Ryegrass a very good crop and was secured in fair condition, although the weather was rather difficult ; 2 to 3 tons per acre on good land. *Meadow Hay*—A good crop and secured in fair condition ; 30 to 40 cwt. per acre. *Potatoes*—Above the average ; 8 to 10 tons per acre ; there was some blight in some varieties and they have not kept well in pits ; a great deal of difficulty in getting sufficient labour for lifting the crop. *Turnips*—Under average ; came badly to hoe and were behind the whole season ; 12 to 14 tons per acre. *Insects*—Turnip-fly gave a good deal of trouble and many acres of turnips had to be resown. *Weeds*—Annual weeds were very bad owing to wet summer and did a good deal of damage. *Pastures*—Above average. *Live Stock*—Throve well and much better than the previous year. Cattle and sheep generally free of disease. *Clip of Wool*—Rather over average.

DUMFRIES (Nithsdale). *Wheat*—None grown. *Barley*—None grown. *Oats*—Ripened end of August and first week of September. *Harvest*—Early cut oats got a lot of rain but September cut got in good order, in many cases better than for years ; main difficulty this year was cutting it, owing to rain ; threshing very well, better than last year. *Hay*—About same as last year ; quality not so good owing to rain, and being over-ripe when cut ; stacking very slow owing to weather. *Meadow Hay*—Same as last year ; quality not so good owing to rain ; stacking a long-drawn-out job. *Potatoes*—Very poor crop on wet farms, but good on drier ground ; about 2 tons per acre ; a little disease. *Turnips*—A good crop this year, but a few failures on some farms ; about 16 tons per acre ; braided well and then frosted out, with the result that a lot of resowing was necessary ; free from disease. *Insects*—No injury reported. *Weeds*—Crops in some places badly weeded. *Pastures*—Very good and lasted out well into October. *Live Stock*—Throve well on pasture, but hardly as good as last year ; milk cows did better than last year, but not eild stock. Cattle and sheep free from disease, except for trembling, &c., in ewes and lambs. *Clip of Wool*—Good.

DUMFRIES (Eskdale). *Wheat*—None grown. *Barley*—None grown. *Oats*—Rather disappointing crops all over and did not thrash well ; straw did not bulk well. *Harvest*—Started about the usual time, but was very protracted owing to very wet weather ; most crops were not secured in good condition. *Hay*—Good crops of ryegrass ; some were got in very good condition, others badly weathered. *Meadow Hay*—Good crop ; but most difficult to secure owing to continuous rains ; very little was got in good condition. *Potatoes*—Much smaller crop than last year and a big proportion of rotten potatoes, chiefly caused by the continual wet all summer. *Turnips*—Quite average, and better than last year ; braided well and very little resowing required. *Insects*—Very little damage. *Weeds*—Very difficult to keep down owing to wet weather ; one crop got badly choked. *Pastures*—About average growth. *Live Stock*—Considering the long wet season, throve not badly, especially towards the autumn. Cattle and sheep very free from disease ; sheep more free from disease than for many years. *Clip of Wool*—Quality good ; quantity lighter than last year.

KIRKCUDBRIGHTSHIRE. *Wheat*—Very small acreage; about 17 cwt. per acre. *Barley*—Very little grown; crop quite good but, owing to wet weather, yield was unsatisfactory. *Oats*—Acreage larger than 1947, similar to 1946; in spite of a bad harvest, yield very good, 40 to 50 bushels per acre. *Harvest*—General by 12th August, but owing to an extremely wet August and September most harvests were not finished until second week of October. *Hay*—A difficult season owing to showery weather; good crops were, however, secured in fairly good order; 45 cwt. per acre. *Meadow Hay*—A good crop, but some of the late hay got badly weathered; 35 cwt. per acre. *Potatoes*—Acreage similar to 1947, but crops were exceptionally good; 8 to 12 tons per acre. *Turnips*—Crop similar to 1947, but kale the best for very many years; later-sown turnips braided very slowly owing to very dry weather in May. *Insects*—No reports of damage. *Weeds*—No unusual trouble. *Pastures*—A most excellent season, except for a short period in May; much better than 1947. *Live Stock*—All did exceedingly well; hoose or husk was very prevalent in calves; otherwise nothing to report. *Clip of Wool*—Excellent; 25 per cent higher than 1947.

WIGTOWNSHIRE. *Wheat*—Very little grown. *Barley*—Very little grown. *Oats*—Possible average, 38 to 40 bushels per acre; the seed bed was good and oats generally braided well; although much of the summer was wet, oats filled out well and were better headed than the previous year. *Harvest*—Started about the usual time, and as the bulk of the oats had stood up well, cutting was accomplished without much trouble, although the weather was somewhat broken; stacking was started in fair weather, but later it broke and only short spells could be got at a time, which made the harvest longer and more costly; some of the later crop was spoiled. *Hay*—Turned out a good crop; broken weather retarded operations, but much of it was got in good condition; 2 to 3 tons per acre. *Meadow Hay*—A moderate crop, and owing to bad weather some of it was of second-rate quality. *Potatoes*—Earlies suffered from frost and a poor yield was obtained at first, but improved later; 6 to 8 tons per acre; later crops were a better crop than the previous year, but broken weather was against harvesting. *Turnips*—In many places the braird was very uneven, and owing to frost there was a good deal of resowing; the wet summer inclined the plants to grow more to shaw than usual; growth of bulb improved later and turnips were fairly sound; 15 to 18 tons per acre. *Insects*—On some farms the fly was troublesome in the turnip crop. *Weeds*—Dockens and thistles very prevalent; less redshank than usual; not enough weed-cutting done on some farms. *Pastures*—Generally fairly good, but lack of sunshine was against them carrying out in the back-end. *Live Stock*—Did very well; lambing rather above average and not so much disease; hoose and mastitis prevalent in dairy herds. *Clip of Wool*—Above average both in quality and quantity.

GLASGOW DISTRICT.

AYRSHIRE. *Wheat*—Grain, 22 cwt. per acre; average quantity and quality, except in later areas; harvested in fair condition; straw good, heavy; seed down, 4 bushels per acre. *Barley*—Not much grown; harvested in poor condition, due to weather; crop badly laid. *Oats*—Heavy yields, but harvest conditions very bad and quite a degree of oats lost or weathered, especially in inland districts; yield, 18 cwt. per acre; straw, 20 cwt. per acre; quality only moderate. *Harvest*—Fairly early, but very protracted by weather conditions, which in many cases completely spoiled crops. *Hay*—Crop very good in quality and quantity; average of 35 cwt.

per acre for ryegrass. *Meadow Hay*—Good crop, but quality disappointing. *Potatoes*—Yield very good, but maincrop potatoes suffered badly from blight; average yield, 7 tons per acre. *Turnips*—Crop best for many years; braided well and bulbed well, especially where kept free from weeds; yield, 18 tons per acre. *Insects*—Turnip flea beetle proved troublesome in May and June. *Weeds*—Not more prevalent than usual. *Pastures*—Matured early and growth continued into late autumn; quality very good. *Live Stock*—Very good season for all classes of stock and kept free from disease. *Clip of Wool*—Above average in quality and quantity.

BUTE. *Wheat*—None grown. *Barley*—None grown. *Oats*—An excellent crop throughout the island; 20 to 30 cwt. per acre. *Harvest*—Commenced in second week of August; very much delayed owing to excessive wet weather; oats never threshed better, but are a little discoloured. *Hay*—30 cwt. per acre; not so much clover as last year; mostly all got in excellent condition. *Meadow Hay*—Very little grown. *Potatoes*—An excellent crop all over, except where earlies were very severely frosted in late May; earlies, 12 tons per acre; lates, 10 tons per acre; little disease; no new varieties grown. *Turnips*—Very good crop all over the island and keeping well; 25 tons per acre; had a very good braird, with a little resowing. *Insects*—Turnips badly affected with maggot-fly; not so prevalent in sandy soils as last year. *Weeds*—A number of fields affected with charlock. *Pastures*—Grass was much better throughout the island this year; had a tremendous growth of wild white clover in early August. *Live Stock*—Did extra well; a few cases of udder-clap, but less numerous than last year. *Clip of Wool*—Above average.

ARRAN. *Wheat*—None grown. *Barley*—None grown. *Oats*—Produced about 18 cwt. per acre, with a similar weight of straw; crop was fairly well secured, except in some of the later parts. *Hay*—30 to 40 cwt. per acre; secured in good condition. More farmers are now using tripods, which speed up the work, resulting in better quality. *Meadow Hay*—Not much grown and generally of poor quality. *Potatoes*—Extra good crop, both early and late; 7 to 12 tons per acre recorded. *Turnips*—Crop very irregular and much damage done by grub; yield, 15 to 20 tons per acre. *Insects*—This has been the worst year for the grub, which attacks the turnip in late September and October. *Weeds*—Not troublesome where proper cultivation carried out. *Pastures*—Quite good where properly dressed in spring with fertilisers, but many farmers do not attend to this necessary method. *Live Stock*—Stock do better where this is done. There has been no disease amongst sheep or cattle. Arran is now 98 per cent attested, and pedigree Ayrshire herds are being formed by being graded up through milk records. Arran is becoming famous for its herds of Ayrshire cattle and many good bulls are being used throughout the island and stock are in great demand, as they develop greatly when they go to the mainland. *Clip of Wool*—About average.

LANARKSHIRE (Upper Ward). *Wheat*—Very little grown; not suitable for milling. *Barley*—Not much grown. *Oats*—45 to 70 bushels per acre; quality of straw and grain very good. *Harvest*—Began usual time; crop secured in very good condition. *Hay*—1½ to 3 tons per acre; excellent crop secured in first-class condition. *Meadow Hay*—A good crop and well secured. *Potatoes*—A good crop; 6 to 9 tons per acre; lifted under good conditions and kept well; a large quantity went to the Ministry of Food for stock-feeding. *Turnips*—A good crop; did not keep too well in spring owing to open winter. *Insects*—No injury reported. *Weeds*—

No injury caused; kept well under control, good weather. *Pastures*—Good; lasted well into late autumn. *Live Stock*—Throve well; no disease. *Clip of Wool*—Quantity and quality above average.

LANARKSHIRE (Middle and Lower Wards). *Wheat*—Grain, 20 cwt. per acre; straw, 25 cwt. per acre; quality fairly good. *Barley*—Very little grown in the district. *Oats*—Grain, 20 cwt. per acre; straw, 22 cwt. per acre. *Harvest*—Started about usual time, but protracted by wet weather; fairly well secured, but some waste on most farms. *Hay*—1 ton 14 cwt. per acre; very well secured. *Meadow Hay*—Very little grown in district. *Potatoes*—7 tons per acre; some disease due to very wet season, noticeable about four weeks before digging; no new varieties worthy of note. *Turnips*—15 tons per acre; very good keeping quality; crop braided well, but in a few cases had to be resown, in some cases for third time; some fields were patchy throughout season; turnip-fly seemed to be cause of trouble. *Insects*—Turnip-fly on braird. *Weeds*—More in evidence than usual, especially redshank in turnip crop. *Pastures*—Better than average in early part of season, but suffered later as result of very wet season. *Live Stock*—Throve very well in early season, but lost condition later in autumn; cattle and sheep fairly free from disease. *Clip of Wool*—About an average, of fairly good quality.

RENFREWSHIRE. *Wheat*—Good crop; 25 to 30 cwt. per acre where well got, but much lost in stooks due to weather; straw similar; seed sown, 3 to 4 bushels per acre. *Barley*—None grown. *Oats*—Above average; yields, 25 to 30 cwt. per acre where well got, but much lost in stooks, with shedding and sprouting, due to bad harvest weather; straw, 20 to 25 cwt. per acre. *Harvest*—Commenced about 13th August; about a week earlier than last year and finished about the end of September, three weeks later than last year; much grain, however, was still out in 'huts' after that date; weather all through was very broken, with the exception of from 16th to 21st September, when the bulk of the harvest was secured; much damage and loss was sustained on most farms from sprouting and shedding, but on the whole the crop was secured better than in the disastrous harvest of 1946. *Hay*—Average to good crop; 2 to 2½ tons per acre, secured mostly in good order; clover more predominant than usual. *Meadow Hay*—Average crop secured in only moderate condition; about 20 cwt. per acre. *Potatoes*—An excellent crop, which would have been even better but for odd soured patches in many fields due to excessive rainfall in August and September; yield, second earlies, 9½ to 10½ tons per acre; maincrops, Kerr's Pink and Redskins, 10½ to 11½ tons per acre; not much blight, but a percentage lost through rot and souring; no new varieties reported. *Turnips*—A moderate crop, about 15 tons per acre; no second sowings required; braided slowly and unevenly, and took longer than usual to come to the hoe; a late May frost did no harm. *Insects*—No extensive damage noticed. *Weeds*—Very troublesome, especially in green crop, due to the wet season; redshank and thistles well to the fore; casual labour for hand-weeding now almost a thing of the past. *Pastures*—Came early and grazed well right up to the end of the year; due to the extensive cropping programme, many fields were, if anything, overstocked. *Live Stock*—Did well and no outbreaks of disease reported; the maggot-fly has now met its match with the new dips incorporating D.D.T. and "Gammexane." *Clip of Wool*—Under average for quantity and quality.

ARGYLLSHIRE (Lochgilphead). *Wheat*—None grown. *Barley*—Very little grown. *Oats*—An average crop; grain, 25 to 30 bushels per acre;

straw, about 20 cwt. per acre; quality, on the whole, poor; seed sown, 5 to 6 bushels per acre. *Harvest*—Started at the usual time, but cutting much delayed by wet and stormy weather, which persisted throughout September and October; the crop suffered much loss and damage before it was secured. *Hay*—A good crop, about equal to last year; probably 25 cwt. per acre, and in some cases more; quality variable owing to lack of good haymaking weather. *Meadow Hay*—A heavy crop, but much of it was lost or heavily damaged owing to the very wet weather from August onwards. *Potatoes*—Slightly better than last year; 5 to 6 tons per acre; most of it lifted in good order; no disease reported; no new varieties. *Turnips*—Rather better than last year; 20 to 23 tons per acre; braided well and little or no resowing was required. *Insects*—Not to any extent. *Weeds*—Were troublesome in green crop and the wet summer made it difficult to keep them down. *Pastures*—Came away early and lasted out well. *Live Stock*—Throve very well and were generally free from disease. *Clip of Wool*—Better than average in both quality and quantity.

ARGYLLSHIRE (Kintyre). *Wheat*—Very little grown; grain has shown a slight increase this year and is probably 20 cwt. per acre; straw, about 27 cwt. per acre; seed sown, $3\frac{1}{2}$ bushels per acre. *Barley*—Quality still very good, as much of the crop was cut before the weather became too wet; yield up from 18 to 20 cwt. per acre, with straw around 17 cwt. per acre; $3\frac{1}{2}$ to 4 bushels of seed sown. *Oats*—Threshing much better this year and over-all quality much higher; average around 18 cwt. per acre, ranging from 12 to 22 cwt.; straw at 1 ton per acre; acreage well maintained, but production higher owing to better yields in spite of cold spring, which continued into the summer, when there was also a good deal of rain; late cut crops required a lot of handling. *Harvest*—Cutting commenced during the first ten days of August, which was about the same as in 1947; early crops fared best, as the harvest was much protracted owing to rain experienced in nearly every period of 24 hours; in spite of this there have been very few cases of stacks heating, in contrast to 1947 when the weather was good. *Hay*—Spring again cold, but the yield would be about 2 cwt. per acre up on 1947 (i.e., 22 cwt.); in spite of the weather the crop was largely secured in good order, and in general in better condition than in 1947. *Meadow Hay*—Quite a good crop secured in good order, with a yield of 30 to 40 cwt. per acre; the same as in 1947. *Potatoes*—Many crops badly checked by severe May frosts, in some cases being completely blackened to the ground; later planted crops yielded well in spite of the almost sunless summer; yield, 8 to 9 tons per acre; blight tended to be more prevalent this year, and comparatively little spraying is yet carried out. *Turnips*—The extremely cold weather in the second half of May severely checked growth, and many braids were uneven, while crops took unduly long to reach the thinning stage; average yield was up, and was from 18 to 22 tons per acre. *Insects*—Flea beetle caused more damage this year, and this was probably noticed more owing to the fact that the crop was at a standstill in its early stages, due to cold weather; many crops were dusted, though supplies of available powder tended to be short; mud beetle also in evidence. *Weeds*—It was almost impossible to check weeds properly this year, as in the continued damp conditions many were merely transplanted during cultivations; many greencrops were avoidably dirty; redshank and chickweed in greencrop and rushes; dockens and ragwort in pastures and hay. *Pastures*—Grass came earlier than in 1947, as the first half of May was good growing weather; damp conditions suited pastures, which yielded well and for a much longer period than usual; slight growth in many places till well on in the year.

Live Stock—Throve well; sheep were in excellent condition at lambing and the lambs were large and thrived well, with the ewes milking heavily; cattle milked much better, and not only was the total production much higher, but the peak was maintained over a longer period; stock did not suffer from any widespread outbreak of disease. *Clip of Wool*—Slightly up on 1947, and quality good.

ARGYLLSHIRE (Islands of Islay, Jura, and Colonsay). *Wheat*—None grown. *Barley*—None grown. *Oats*—Yielded about 41 bushels per acre at about 40 lb. per bushel; crop showed an improvement on 1947, with straw back to average in length. *Harvest*—Begun about second week in August, but due to adverse weather was not completed until beginning of October; the crop was, however, secured in fairly good condition, although with difficulty. *Hay*—Quantity slightly over average, but not generally so good as last year; ryegrass yielded about 25 cwt. per acre and clover about 33 cwt. per acre. *Meadow Hay*—Crop did not come up to 1947 standard and was mainly about average in yield. *Potatoes*—Yielded rather more than 7 tons per acre, but the quality was rather below average, as many of the tubers were exceptionally wet; some blight present, commencing in September; lifting proved difficult and protracted; usual varieties, with Kerr's Pink predominant, were again grown. *Turnips*—Crop rather below average in quantity and quality, yielding about 14 tons per acre; white varieties proved poor keepers this year, due probably to the water-logged condition of the ground and the roots were in all cases smaller than usual; crop braided well and generally one sowing was sufficient. *Insects*—There was no undue damage; turnips and oats planted near woods suffered less from wood pigeons and other winged wild game. *Weeds*—Some crops, mainly turnips, were checked in growth by prevalence of redshank; difficult to keep under control on account of wet season, but damage would only slightly exceed the average summer. *Pastures*—Proved sufficient, but the growth and quality was below average; a marked lack of sunshine, grey skies, and cold winds kept a check on pastures until past their best. *Live Stock*—Did moderately well, but with growth of pasturage unduly slow, it was eaten as it came. Generally free from disease. *Clip of Wool*—Above average in quality and quantity. *General*—The 1948 season was a disappointing one. There were only two brief periods in May and July of really fine weather, each extending to about a week. Over the spring and summer skies were mainly overcast, with a cold wind which checked grass and retarded crops generally. Rain set in with the commencement of harvest and continued, with brief interruptions, until the end of the year, greatly adding to the difficulties of harvesting and rendering this unduly protracted.

STIRLING DISTRICT.

DUNBARTONSHIRE (Upper). *Wheat*—Below average crop; 25 bushels per acre; straw about 35 cwt. per acre; quality of both grain and straw was poor; seed sown, 3 to 4 bushels per acre. *Barley*—None sown. *Oats*—Average crop; 40 to 45 bushels per acre; straw, 25 cwt. per acre; quality fair, but badly weathered; seed sown, 4 to 5 bushels per acre. *Harvest*—Started about usual time, but was very protracted due to very wet weather; grain was growing in the stook badly in sheltered fields; straw became very brittle. *Hay*—Averaged about 28 cwt. per acre; quality was very good for both ryegrass and clovers. *Meadow Hay*—Was difficult to save as August was wet. *Potatoes*—Yield around 7 tons per

acre ; disease was not very common ; no new varieties were grown to any extent. *Turnips*—Crop was the best for many years ; about 20 tons per acre ; braided well, and very few second sowings required. *Insects*—Very little damage. *Weeds*—Difficult to keep under control due to the very wet season ; most common was redshank. *Pastures*—Growth and quality of grass was reasonably good, until the late season, when it was too soft. *Live Stock*—Did well on grazings until the late back-end ; generally free from disease. *Clip of Wool*—Above average and of good quality.

DUNBARTONSHIRE (Lower). *Wheat*—Grain, 38 bushels per acre, weighing 58 lb. per bushel ; quality damaged by poor harvesting weather ; straw about 24 cwt. per acre, quality poor ; seed sown, 4 bushels per acre. *Barley*—Very little grown. *Oats*—Oats yielded about 46 bushels per acre, but quality of both grain and straw suffered from inclement weather while in the stook ; grain averaged 38 lb. per bushel ; straw about 22 cwt. per acre ; seed sown, 5½ bushels per acre. *Harvest*—Grain started about the usual time, but the securing of the crops was slow and delayed by heavy rains, which adversely affected the quality of both straw and grain. *Hay*—A good average crop yielding about 2 tons per acre, with about 80 per cent of the crop first-class quality. *Meadow Hay*—Mostly timothy ; a good crop, yielding about 45 cwt. per acre. *Potatoes*—Heavier than 1947, yielding about 7 tons per acre ; disease made its appearance in September and affected the bulking of the crop ; harvesting of late varieties was slow and difficult ; no new varieties planted. *Turnips*—Turnips and swedes would yield about 18 tons per acre ; quality good ; a bulkier crop than in 1947 ; the seed braided well and no resowing was necessary. *Insects*—Little or no damage. *Weeds*—Annuals were troublesome in the turnip crop, mostly redshank. *Pastures*—Maintained a good average growth throughout the season, and kept fresh well into the winter. *Live Stock*—Cattle and sheep made good progress and thrived well on the pastures ; were generally free from disease. *Clip of Wool*—Better than in 1947.

STIRLINGSHIRE (East). *Wheat*—A good crop, some of it laid and difficult to cut ; threshed out to 35 bushels per acre ; straw, 25 cwt. per acre ; quality only fair, a little sprouted, having stood a long time in the stook ; seed sown, 4 bushels per acre. *Barley*—Very little grown, and what was harvested was only fair ; 30 bushels per acre ; straw, 20 cwt. per acre. *Oats*—Quite a good crop ; threshed 30 to 40 bushels per acre ; straw, 30 cwt. per acre ; owing to the wet weather, quality not so good as last year and much discoloured ; seed sown, 5 to 6 bushels per acre. *Harvest*—Started the middle of August, and it was the end of September before the bulk was cut ; some fields got over-ripe and broken down, and had to be reaped like hay ; odd fields never cut. *Hay*—Ryegrass, 30 to 40 cwt. per acre ; timothy grown on the Carse up to 4 tons per acre ; quality only fair, except the crop which was secured in July, which was in great order. *Meadow Hay*—Quite a good crop, but very hard to make ; quality bad ; 25 to 35 cwt. per acre ; not so good as last year. *Potatoes*—Crops varied, and similar to last year ; in some cases, 10 tons were reported, but, generally speaking, tubers were small and many wasted, being left in the ground ; few new varieties were grown ; no disease. *Turnips*—Over 20 tons reported per acre ; quality better than last year ; braided well and the crop secured in good order ; kept first class ; no resowing. *Insects*—Very little damage done to crops. *Weeds*—Charlock seems to be the predominating weed amongst the oats, and worse than last year ; turnips had a little redshank. *Pastures*—Started well, but spring frosts gave them a check ; recovered in July and did quite well right on to October, although

wet-bottomed land poached a little. *Live Stock*—Cattle grazed well and finished fat; a few udder-clap cases reported amongst back-calving cows; maggot not so prevalent as the previous year amongst sheep. *Clip of Wool*—Up to average.

CLACKMANNANSHIRE. *Wheat*—Braided quickly and was a bulky crop, but many samples of sprouted grain due to the wet harvest; 32 to 40 bushels per acre; straw, 25 to 30 cwt. per acre; seed sown, 4 bushels per acre. *Barley*—A good crop, more uniform than last year; 40 to 45 bushels per acre, with grain well filled; straw, 20 cwt. per acre; seed sown, 3 to 4 bushels per acre. *Oats*—A heavy crop, 50 to 65 bushels per acre; many discoloured samples; in some cases, about 8 bushels per acre lost due to "shedding"; straw, 15 to 30 cwt. per acre, according to variety; seed sown, 4 to 6 bushels per acre. *Harvest*—Began about 24th August and was protracted by bad weather, although the grain was, in most cases, secured in fair condition. *Hay*—Ryegrass and clover hay a good crop, 40 to 45 cwt. per acre; timothy up to 4 tons per acre; early-cut hay was well got, but late-cut hay got some weather; never has so much hay sat in tramp rick for so long, some still sitting out in December. *Meadow Hay*—None grown. *Potatoes*—A more uniform crop than last year; considerable disease in early varieties and late varieties attacked by slugs; Kerr's Pink, 8 to 10 tons per acre; Redskins, up to 10 tons per acre; Golden Wonder, up to 7 tons per acre. *Turnips*—Good crop, 15 to 20 tons per acre; some resowing due to a sharp attack of turnip flea beetle. *Insects*—With the exception of slugs on late potatoes and the turnip flea beetle on turnips, no damage. *Weeds*—Little damage. *Pastures*—Grass was earlier than last year and was abundant throughout the year, continuing well into autumn. *Live Stock*—Cattle and sheep thrived well and were free from disease. *Clip of Wool*—Above average, about 10 per cent better than 1947.

PERTH DISTRICT.

PERTHSHIRE (Central). *Wheat*—Fair crop; 32 to 44 bushels per acre; not too well filled owing to lack of sunshine; straw, 24 to 32 cwt.; some fields very badly laid owing to the incidence of eye-spot or take-all; seed sown, $3\frac{1}{2}$ to 4 bushels per acre. *Barley*—Good crop; 24 to 60 bushels per acre; straw, 15 to 25 cwt. per acre; not a large acreage grown; quality average; seed sown, 3 bushels per acre. *Oats*—A very good and bulky crop with considerable lodging; 56 to 80 bushels per acre; straw, 20 to 35 cwt. per acre; only moderate acreage secured in first-class condition; seed sown, 5 to 6 bushels per acre. *Harvest*—Started about a week later than usual and was protracted by excessive rainfall, which led to tangled crops, the bogging of binders and combines, the land being badly cut up; crop secured in fair condition, but with some sprouting in the stook in the case of wheat. *Hay*—Good crop, $1\frac{1}{2}$ to $2\frac{1}{2}$ tons per acre; good mixture of clover; stacking very protracted owing to wet weather. *Meadow Hay*—Crop good, but very small amount secured because of wet weather. *Potatoes*—An excellent crop; 6 to 13 tons per acre; considerable blight amongst earlies. *Turnips*—Mainly a good crop; 15 to 35 tons per acre; where early sown there was a considerable percentage of bolters. *Insects*—Turnip flea was the worst offender, and caused a lot of damage to the crop in some areas. *Weeds*—Less troublesome than usual; early potatoes with small tops were probably worst affected. *Pastures*—Did very well and never suffered from lack of moisture. *Live Stock*—Throve well on

plentiful keep; lambs especially were presented at the autumn sales in good condition; cattle and sheep were generally free from disease, hoose in young dairy stock being the principle trouble; there was less trouble with maggots in sheep stocks than usual. *Clip of Wool*—Good both for quality and quantity.

FIFESHIRE (Middle and Eastern). *Wheat*—Again very variable, with whole fields laid flat, which did not thrash well; grain, 28 to 48 bushels per acre; straw, 20 to 30 cwt.; seed sown, 3 to 4 bushels per acre; large number of crops affected with rust and root disease. *Barley*—A much better crop than last year; yield, 32 to 56 bushels per acre; straw, 20 to 25 cwt. per acre; seed sown, $2\frac{1}{2}$ to $3\frac{1}{2}$ bushels per acre. *Oats*—The best crop for a number of years; thrashed well, from 48 to 96 bushels per acre; straw, 30 cwt. to 2 tons per acre; seed sown, 5 bushels. *Harvest*—Started about usual time; due to strong wind a large quantity of barley was lost through shake, as much as 1 qr. per acre in some cases; with the wet weather the harvest was long-drawn-out, but with the drying winds there was very little loss; the combine harvester was a great help in dealing with the lying crops. *Hay*—Good crop, about the same as last year; 2 to $2\frac{1}{2}$ tons per acre. *Meadow Hay*—None grown. *Potatoes*—Very big crop of potatoes; about double last year; 8 to 12 tons, and in some cases more, per acre; Home Guard was planted very extensively, but there was not a big demand for seed of this variety from England; some disease on heavy land. *Turnips*—A very big crop; some of the very early sowing bolted or went to seed, almost 100 per cent; there was a good amount of resowing on account of fly and/or frost damage; yield, from 20 to 30 tons per acre. *Insects*—More damage than usual to young swede plants. *Weeds*—Wild tares again very bad; where cereals were dressed fairly late with a Methoscone spray or powder, it was very effective; owing to wet summer, couch very bad in a number of potato and swede crops. *Pastures*—Pretty bare in May and June, but they grew well after that. *Live Stock*—Throve well on the pastures, and were generally free from disease. *Clip of Wool*—About average.

PERTSHIRE (Eastern). *Wheat*—A good crop; thrashed fairly well; quite average; 40 to 48 bushels per acre; seed sown, 4 bushels per acre. *Barley*—A good crop but had some difficulty in harvesting; samples, where early, only moderate; later samples good, 36 to 40 bushels per acre; seed sown, $2\frac{1}{2}$ to $3\frac{1}{2}$ bushels per acre. *Oats*—A very good crop, plenty of straw and thrashed well; seed sown, 4 to 6 bushels per acre; yield, 40 to 60 bushels per acre; samples varied; early-cut samples were only moderate; late-harvested samples quite good. *Harvest*—Started at usual time, middle of August, but was delayed by exceptional rainstorms, which made the land so soft that binders were often stuck in pools of water in the fields, with the result that some crops got over-ripe, with a good deal of shedding. *Hay*—Good and was got in good condition; mostly ryegrass hay; yield, 45 to 55 cwt. per acre. *Meadow Hay*—Average crop, but owing to the weather conditions the quality was only moderate; yield, 30 to 40 cwt. *Potatoes*—A bumper crop; yields being up to 12 tons per acre; some difficulty in lifting owing to a bad break in the weather; very little disease, but some varieties pitted wet did not keep well. *Turnips*—Good crop, but some resowing required owing to beetle fly; kept extra well during winter, there being an abundance of turnip in the spring for all stock. *Insects*—Very little trouble caused. *Weeds*—Not so prevalent as last year but wild tares are spreading in this area; most farmers are now spraying to kill them. *Pastures*—Good all summer; stock grazed

well into the autumn, with very little frost to kill clovers. *Live Stock*—Throve well, and were generally free from disease. *Clip of Wool*—Average, and good quality.

PERTSHIRE (Highland). *Wheat*—Not generally grown, except a few acres on suitable farms. *Barley*—In most cases fair; about 36 bushels per acre; seed sown, about 4 bushels per acre. *Oats*—Average acreage sown; yield light; natural weight about 42 lb. per bushel; seed sown, 6 bushels per acre. *Harvest*—Begun in middle of August and was completed by the last week of September; grain and straw were of good quality. *Hay*—Average and of fair quality; 25 cwt. per acre. *Meadow Hay*—Not much grown; average crop. *Potatoes*—Average about 6 tons per acre; crop well secured under favourable conditions; no new varieties grown. *Turnips*—Crop fair; yield, 21 tons per acre; crop in some cases braided unevenly and required second sowings. *Insects*—No injury reported. *Weeds*—More in evidence than in former years. *Pastures*—An average grazing season. *Live Stock*—Throve well; generally free from disease; a few isolated cases of grass-sickness among horses. *Clip of Wool*—Good quality; about an average crop.

ANGUS (Western). *Wheat*—30 bushels per acre; grain, good sample; straw good; seed sown, 3 to 4 bushels per acre. *Barley*—36 bushels per acre; grain, good sample; seed sown, 3 to 4 bushels per acre. *Oats*—60 bushels per acre; grain and straw very good quality; seed sown, 5 to 6 bushels per acre. *Harvest*—Commenced about the same time as last year, but owing to bad weather about the end of August much crop got over-ripe before being cut; weather improved during September and the crop was secured in good condition. *Hay*—About 40 cwt. per acre; mostly secured in good condition. *Meadow Hay*—None grown. *Potatoes*—7 to 8 tons per acre; a heavier crop than last year; a good deal of disease in some early varieties. *Turnips*—15 to 25 tons per acre; were sown early, but owing to frost and the turnip beetle, a good deal of resowing had to be done, with the result that many crops were deficient in weight. *Weeds*—Resown turnip crops were in some cases very bad. *Pastures*—Good; better than last year, with abundance of clover. *Live Stock*—Throve well at pasture; cattle and sheep were generally free from disease. *Clip of Wool*—Quality good and much heavier than last year.

ABERDEEN DISTRICT.

ANGUS (Eastern). *Wheat*—Looked a good crop, but owing to the sunless summer did not thrash to expectations; still, 40 to 48 bushels per acre is average; grain was got in in very dry order and colour quite good; straw generally abundant, but did not stand up too well; seed sown, 3½ to 4 bushels per acre. *Barley*—Generally a good crop; 48 to 56 bushels per acre on really good land, but fields sown after bad rains came in spring were poor through wet tillage and want of lime; grain a good colour and straw stood up well; seed sown, about 3 to 3½ bushels per acre, dressed. *Oats*—A very satisfactory crop; 10 to 11 qrs. per acre being quite common and 8 qrs. about the average on good land after grass; after green-crop a good deal less and more "seconds" had to be dressed out; colour very good in spite of rain; straw plentiful and well got, though rather over-ripe at times; seed sown, 5 to 6 bushels per acre, dressed. *Harvest*—About the usual time, the last week in August, and proceeded speedily, but took rather longer to overtake owing to the very bulky crop and

shortage of labour, but was secured in good order. *Hay*—Good crop, much heavier than last year; both ryegrass and clover satisfactory, with crops of 3 to 4 tons per acre; the weather suited and the crop was well and speedily secured; aftermath came away speedily and abundantly. *Meadow Hay*—None grown. *Potatoes*—Crop, 2 to 3 tons more than last year, but where not burned down before disease showed there was, in soft varieties, a considerable loss with disease; yield, generally 10 tons per acre; no outstanding new variety of any note. *Turnips*—Crop varied; in many cases over 30 tons per acre, others almost a failure; the earliest sown were badly frosted and, after resowing, late sown were attacked by fly and some had to be harrowed out; healthy crops grew far into winter and were sound and good; yellow turnips were a better crop than for many years, if they escaped fly. *Insects*—Turnip-fly did a lot of damage, much more than usual. *Weeds*—Not worse than usual, but, where the braird came away well, were easily overcome. *Pastures*—Good and early and grew well all season. *Live Stock*—Throve well and grew well during the whole season, as feed was abundant; no disease was noted in either cattle or sheep. *Clip of Wool*—Heavier than last year and quality good; owing to showery weather clipping was more difficult to finish.

KINCARDINESHIRE. *Wheat*—40 bushels per acre; straw good; seed sown, 3 to 4 bushels per acre, drilled. *Barley*—36 bushels per acre; grain light; straw good quality; seed sown, 3 bushels per acre, drilled. *Oats*—50 bushels per acre; grain rather light; straw good; harvesting commenced 25th August. *Harvest*—Rather extended, due to bad weather in the first two weeks, but had good weather afterwards and crop was mostly secured in good condition. *Hay*—40 cwt.; quality bad. *Meadow Hay*—None grown. *Potatoes*—7 tons per acre; some blight among early varieties. *Turnips*—16 tons per acre; resowing quite common off the coast, but many of the earlier sown turnips bolted. *Insects*—No damage. *Weeds*—No damage. *Pastures*—Well above average growth for the season. *Live Stock*—Made very good progress in early part of season, but conditions were rather wet for progress in later part of season; generally free from disease. *Clip of Wool*—Quality good; average quantity.

ABERDEENSHIRE (Buchan). *Wheat*—Very little grown. *Barley*—40 bushels per acre; seed sown, 3 bushels per acre. *Oats*—Good crop well harvested; 48 to 72 bushels per acre; seed sown, 5 to 7 bushels per acre. *Harvest*—Started about 20th August; bad weather for a start, but improved later and crop secured in good condition. *Hay*—4 tons per acre; quality fair; bad weather during the harvesting. *Meadow Hay*—Very little grown. *Potatoes*—Earlies, about 4 tons per acre; and lates, 6 tons per acre; early potatoes were very small, owing to frost damage, when they came through, and lack of sunshine; later varieties, average crop; not much disease. *Turnips*—About 12 tons per acre; good quality, except for shot ones, which were more numerous than usual; lot of resowing of early turnips owing to frost. *Insects*—Not much damage. *Weeds*—Potatoes and turnips were difficult to keep clean owing to wet weather. *Pastures*—Better than usual. *Live Stock*—Did well, and very little disease. *Clip of Wool*—Average.

ABERDEENSHIRE (Central). *Wheat*—16 cwt. per acre; seed sown, 3½ bushels per acre; less than average. *Barley*—16 cwt. per acre; seed sown, 3½ bushels per acre. *Oats*—18 cwt. per acre; seed sown, 5 bushels per acre. *Harvest*—Usual time, notwithstanding rather wet weather at the commencement. *Hay*—25 cwt. per acre; quality only fair due to

wet weather. *Meadow Hay*—Same as 1947. *Potatoes*—Similar to 1947; about 5 tons per acre. *Turnips*—Average, about 9 tons per acre. *Insects*—No damage to any extent. *Weeds*—No damage. *Pastures*—Above average. *Live Stock*—Did well and were generally free from disease. *Clip of Wool*—Average.

ABERDEENSHIRE (Strathbogie). *Wheat*—None grown. *Barley*—Fair crop; average quantity grown; weight below average; 50 to 53 lb. per bushel. *Oats*—Good crop; bushel weight from 39 to 43 lb. per bushel; yield, about 50 bushels per acre; straw plentiful. *Harvest*—Quite normal; crop secured in good condition; summer was abnormally wet. *Hay*—Average crop, with a little less clover than usual; ryegrass up to usual standard; owing to wet weather crop was difficult to secure and darker in colour than usual. *Meadow Hay*—None grown. *Potatoes*—Much below average owing to extremely wet summer; much smaller in size than usual; Kerr's Pink most common variety. *Turnips*—15 tons per acre; quality good; very little second sowing required. *Insects*—Caused no more damage than usual. *Weeds*—More abundant than usual, again owing to wet conditions. *Pastures*—Average growth and quality. *Live Stock*—Did unusually well; many fat cattle graded off grass; very few losses from disease reported. *Clip of Wool*—Average quality and quantity.

BANFFSHIRE (Lower). *Wheat*—None grown. *Barley*—A very poor crop, but harvested in good condition; grain about 35 bushels per acre; bushel weight, 51 to 53 lb.; straw, 20 cwt. per acre; seed sown, 4 bushels per acre. *Oats*—Crop less than last year; well harvested; grain, about 50 bushels per acre; bushel weight, round 42 lb.; straw, 30 cwt. per acre. *Harvest*—Began about the same time as last year; weather was good and all crops were secured in very good condition. *Hay*—Crop less than last year, about 30 cwt. per acre; harvested only in fair order; clover not so plentiful. *Meadow Hay*—None grown. *Potatoes*—Crop not quite up to last year, owing to lack of sunshine; yield, about 5 tons per acre; some disease among first earlies in July; no new varieties planted. *Turnips*—Not up to last year's crop; weight, about 12 tons per acre; crop was slow in braiding owing to cold weather; a good deal of resowing was done. *Insects*—No injury. *Weeds*—No injury. *Pastures*—Growth and quality was less than last year. *Live Stock*—Only did fair; free from disease. *Clip of Wool*—Quality good and well up to average.

BANFFSHIRE (Upper). *Wheat*—None grown. *Barley*—Hardly up to average crop; not enough sunshine to harden grain; a lot not up to standard weight; about 32 to 40 bushels per acre; seed sown, about 4 bushels per acre; straw quite good. *Oats*—Good crop generally, in some cases very good, although bushel weight would hardly be up to standard of last year, say, 42 to 44 lb. per bushel; straw good; average yield of grain, about 40 to 50 bushels per acre; seed sown, 5 to 8 bushels. *Harvest*—Started about usual time; weather during first part was good and satisfactory progress was made; a bit unsettled latter part, but crop was secured in splendid order. *Hay*—In most cases, good average crop; not so much hay kept now owing to fewer horses; average return about 3 tons per acre. *Meadow Hay*—Very little grown. *Potatoes*—Varied reports of potato yield; some above average, others under; yield, say, 4 to 10 tons per acre; usual varieties planted generally. *Turnips*—Not a good crop, about 3 to 6 tons per acre; was slow at coming through and never seemed to cover over drills; not many cases of second sowing reported. *Insects*—Turnip-fly was hard on them in first stages and caused

greater damage than usual. *Weeds*—On account of slow growth of turnips, weeds seemed to get a hold; damage greater than usual. *Pastures*—Quite average growth, similar to last year. *Live Stock*—Did well as far as could be ascertained; not many reports of losses from disease. *Clip of Wool*—Good quality and about average quantity.

INVERNESS DISTRICT.

MORAYSHIRE. *Wheat*—Under average; yield, grain, 42 bushels per acre; straw, 28 cwt. per acre; seed sown, 4 bushels per acre; quality, both grain and straw, second rate. *Barley*—Under average; yield, 40 bushels per acre; quality poor; straw, about 20 cwt. per acre; fair quality. *Oats*—Fair crop, but light bushel weight; yield, 52 bushels per acre; straw, 25 cwt. per acre; good quality; considerable damage by flooding in middle of harvest. *Harvest*—Started rather later, and was hindered by flooding on the low ground, but was secured in good condition. *Hay*—Good average crop; on the hay land, 2 tons per acre, of good quality; on the higher lands, 1½ tons per acre. *Meadow Hay*—None grown. *Potatoes*—Same as 1947; yield, 6 to 9 tons per acre, according to variety and district; not much disease and no new varieties. *Turnips*—Lighter than last year; yield, 14 to 20 tons; good quality and kept well. *Insects*—Less damage than usual. *Weeds*—No damage, except for annual weeds, which were rather troublesome. *Pasture*—Grass very good throughout the season. *Live Stock*—Did well; generally free from disease. *Clip of Wool*—Average in quantity and quality.

INVERNESS-SHIRE (Inverness). *Wheat*—Not extensively grown; round about 100 acres; all autumn sown; crops were bulky but suffered from lack of sun; some fields very badly lodged; crop about 50 bushels per acre. *Barley*—Acreage well maintained; many new varieties have been introduced; yields are improving year by year, due to earlier sowing, liming, and use of phosphatic manures; crop, average 40 bushels per acre. *Oats*—The growing season was remarkable for its lack of sunshine and for the broken weather during harvest; in spite of this the yield was well up to average, and most of it was got in good condition; late districts were again favoured. *Harvest*—Rather later than usual is becoming general; more drawn-out than usual, but eventually was secured in good condition. *Hay*—Crop a good average; 30 to 40 cwt. per acre; clover showed up well. *Meadow Hay*—Not of much importance, except on hill farms; crop was an average one. *Potatoes*—Yield showed a slight increase from previous year; average, 6 tons per acre; disease was not pronounced; spraying is now more common; seed production is increasing each year. *Turnips*—Several crop failures were reported, due to turnip flea beetle; second sowings were common; raan and root-fly still prevalent; yield, 22 tons per acre. *Insects*—Damage rather less than usual, except for turnip flea beetle. *Weeds*—Weed control is improving and damage was less than usual. *Pastures*—Grass came away slowly, but was plentiful during the summer and was well controlled. *Live Stock*—It was a good grazing year and stock thrived well, particularly on the hill grazings; tuppings season was very good; no serious troubles from disease in this county. *Clip of Wool*—Good quality and average quantity.

INVERNESS-SHIRE (Skye). *Wheat*—None grown. *Barley*—None grown. *Oats*—Grain, average, 17 cwt. per acre; straw, average, 18 cwt. per acre; grain quality, fairly good; straw quality mixed, from good to very poor,

due to weathering ; free from disease ; seed sown, 5 to 6 bushels per acre of fine-straw varieties. *Harvest*—Late and carried through with difficulty and with some total loss of oat crop ; crop secured in mixed condition. *Hay*—Good and bulking fully up to the previous year ; yield, say, 1½ tons per acre ; early cut was well secured, but the bulk of the crop suffered from delayed harvesting due to wet weather. *Meadow Hay*—Bulked well, and there were good samples, but weather conditions created difficulty in harvesting. *Potatoes*—Yield averaged about 5 tons per acre ; blight showed late in the season, first before ripening, but would not materially affect the yield. *Turnips*—Light crop ; it is of small incidence in the district ; growth was normal and quite healthy, but bulk was reduced by unfavourable weather conditions. *Insects*—Nothing calling for comment. *Weeds*—Growth was normal, and does not occasion comment. *Pastures*—A long autumn and early winter pasture growth was a feature of the season ; in other respects, growth conformed to normal. *Live Stock*—Throve well and sheep in particular came well on to the winter ; it was not a season notable for disease in stock ; lambs were more numerous but there was a higher proportion of small lambs, and generally they did not have the summer bloom of the previous year but came on to the winter well. *Clip of Wool*—Good and rather more than average in quantity.

INVERNESS-SHIRE (Lochaber). *Wheat*—None grown. *Barley*—None grown. *Oats*—Grain under average and very little secured in good order owing to continuous rain. *Harvest*—Was very long-drawn-out owing to wet and showery weather, and all crops were more or less destroyed. *Hay*—Crops were light and, with the exception of a few lots secured in July, the quality was not very good ; about 2 tons per acre. *Meadow Hay*—Quantity about the same as last year, but again, most of it suffered from broken weather. *Potatoes*—Very good quality and free from disease, but under the average in quantity ; no new varieties planted. *Turnips*—Fully average for the district and kept well free from disease. *Insects*—Very little injury. *Weeds*—Plentiful, as grubbing could not be done regularly owing to rain. *Pastures*—Average. *Live Stock*—Were very healthy and put on good condition ; were generally free from disease. *Clip of Wool*—Average.

ROSS-SHIRE (Dingwall and Munlochy). *Wheat*—Average crop, 32 to 40 bushels per acre ; straw, average ; seed sown, autumn, 3 to 3½ bushels per acre ; spring, 4 bushels per acre. *Barley*—About the same acreage grown ; a great deal of lodging ; yield of grain below average, with a heavy bulk of straw ; seed sown, 2½ to 3 bushels per acre. *Oats*—Good crop ; some fields badly lodged ; grain and straw fully up to average ; yield over 10 qrs. on good land ; seed sown, 4 to 6 bushels per acre. *Harvest*—A little later than last year ; crop all secured in good order. *Hay*—A good crop and secured in good order ; 2 tons per acre on good land. *Meadow Hay*—None grown. *Potatoes*—A good crop, secured in good order, but labour very scarce. *Turnips*—A great deal of resowing required, but with the open winter, late-sown turnips bulked well. *Insects*—No reports of damage. *Weeds*—Not so prevalent, except for annuals in green-crop. *Pastures*—Came away early and grazed well. *Live Stock*—All thrived well ; cattle and sheep generally free from disease, but some cases of grass sickness in horses. *Clip of Wool*—Quality and quantity up to average.

ROSS-SHIRE (Tain, Cromarty, and Invergordon). *Wheat*—Average crop ; 32 to 42 bushels per acre ; varieties grown : Red King, Scottish

Iron III.; seed sown, 3 bushels per acre in autumn, 4 bushels per acre in spring. *Barley*—Threshed badly, due to sunless summer; some fields badly lodged; yield, 38 to 40 bushels per acre; seed sown, 2½ to 3 bushels per acre; Gold, Kenia, Maja; no new varieties. *Oats*—A good crop generally; yield, 60 to 72 bushels per acre; seed sown, 4 bushels per acre; usual varieties sown; Yields predominant; also Eagle, Star, Sun, Victory, Commando. *Harvest*—Started about 20th August; cutting delayed with wet weather; lodged crops; stacking finished about end of September in first-class order. *Hay*—Average crop; damaged with wet weather. *Meadow Hay*—None grown. *Potatoes*—A heavy crop; 2 tons heavier than last year; disease on some farms damaged one-third of the crop; severe frost and wet weather at end of October damaged 10 per cent of the acreage not lifted, and they have not kept in pits; the poorest demand for seed for fifteen years, and were only bought by the Ministry of Food for stock feed. *Turnips*—Slow to germinate, but flea beetle dust prevented fly from destroying crop. *Insects*—Only harm done by turnip flea beetle. *Weeds*—Yellow corn marigold smothered barley crop on some farms. *Pastures*—Average. *Live Stock*—Cattle grazed well, but lambs not as good as last year; dozing has now mastered worms in sheep; cases of cows dying suddenly due to shortage of magnesia; otherwise no disease. *Clip of Wool*—Extra heavy yield.

SUTHERLANDSHIRE. *Wheat*—None grown. *Barley*—About 20 bushels per acre; straw, about 15 cwt. per acre; grain a light crop all over the county, perhaps for want of sunshine; seed sown, about 3 bushels per acre. *Oats*—Were a good crop, especially on good land, and threshed very well; yield, about 36 bushels per acre; straw, about 18 cwt. per acre; quality of grain and straw was, on the whole, very good; seed sown, about 4 bushels per acre. *Harvest*—Was secured about the usual time; it was not unduly protracted, as the weather was fairly good. *Hay*—A fairly good crop; about 17 cwt. per acre; early-cut hay was secured in good condition, but then the weather broke and there was heavy rain every day for weeks. *Meadow Hay*—A poor crop of poor quality, as the weather was so wet all cutting time. *Potatoes*—A good crop taken all over; about 4½ tons per acre; very healthy and very little disease; no new varieties planted. *Turnips*—Taking the county all over, the weight of the turnip crop would be 8 to 9 tons per acre; crop braided fairly evenly, but was nearly drowned with rain after singling. *Insects*—Very little damage done; the turnip-fly affected some fields, but not very seriously. *Weeds*—Some turnip fields were bad; with wet weather it was difficult to get them cleaned. *Pastures*—On the whole were very good, but with the wet they lacked feeding quality. *Live Stock*—Throve fairly well, but lambs especially lacked bloom for want of sunshine; generally free from disease. *Clip of Wool*—Good quality and well over the average for quantity.

CAITHNESS-SHIRE. *Wheat*—Small acreage grown; crops not so good as last year; average yield, 32 bushels per acre; seed sown, 4 bushels per acre. *Barley*—An average crop; similar to last year; yield, 36 bushels per acre. *Oats*—A less productive crop; quality not so good; much of it damaged by rain; average yield, 32 bushels per acre; straw, 2 tons per acre; seed sown, 4 to 7 bushels per acre. *Harvest*—Began at usual time; was very protracted by unfavourable weather; some fields with crop in small land-stacks not yet secured; much of the crop damaged and in bad condition. *Hay*—Crop similar to last year in quantity and quality, both

as regards ryegrass and clover; yield, 4 tons per acre. *Meadow Hay*—Of average productivity, similar to last year. *Potatoes*—Yield, equal to last year, 4 to 5 tons per acre where lifted early; where lifted late, tubers were damaged by frost; on some farms potatoes are still in the ground; some disease, but not extensive; evidence of blight at end of August; no reports of new varieties. *Turnips*—Crop equal to last year; 22 tons per acre; crop braided well, but late-sown turnips severely attacked by fly, and, on some farms, resowing was necessary. *Insects*—With the exception of the turnip crop, no injury reported. *Weeds*—Crops not seriously injured; thistles prevalent in pastures; charlock, spurrey, and sorrel in grain and turnips; damage not greater than usual. *Pastures*—Of average growth and quality, similar to last year. *Live Stock*—Throve well on pasture; cattle and sheep made good progress; cattle and sheep generally free from disease; attacks by maggot-fly less severe than last year. *Clip of Wool*—Average in quantity and quality.

ORKNEY. *Wheat*—None grown. *Barley*—Very little grown, but a fair acreage of bere crop; good average yield, from 4 to 6½ qrs. per acre; average, probably 38 bushels per acre. *Oats*—Only an average year, principally due to weather conditions; very early sowing recorded, 20th February earliest; summer very wet, with strong autumn gales; apart from early farms, it was a latish harvest and much of the crop was taken in in poor condition; yield average, 6 qrs.; straw, mixed quality, approximately 35 cwt. per acre; highest recorded yield, 13½ qrs. per acre. *Harvest*—Harvesting was still in progress at the end of November in one or two cases; a severe gale of wind on 17th September badly shook any crop still standing at that time; very little cutting "round about." *Hay*—Not a good hay harvest; badly protracted, due to weather, and average sample of only medium quality; clover was good; average yield, 38 cwt. per acre. *Meadow Hay*—Better than last year, what there is of it, which is very little. *Potatoes*—A good crop in spite of the lack of sunshine; earlies not so good, being badly frosted and wind-blasted; mosaic plentiful in seed stocks of Dukes and Pilots, although damage mentioned above made it difficult to detect; other diseases not troublesome, except dry-rot in storage; average crop, 6 to 6½ tons per acre; no new varieties. *Turnips*—The crop braided well, but hung fire after thinning; yield, especially swedes, below average, 11 tons per acre; turnip root-fly again very troublesome in Yellows; mild conditions in early December encouraged leaf growth and there was a lot of shooting, as gales in September and October had almost stripped the first leaves. *Insects*—Chief insect pest definitely turnip root-fly, which is very bad in Orkney just now. *Weeds*—Not more than usual; runch is very bad in the North Isles; Agroxone is becoming more popular, however, and should do much to control it in the future. *Pastures*—Average; there was plenty grass all summer. *Live Stock*—Throve well in spite of the wet summer, and the bulk of the cattle finished on the grass graded well; the quality of the entries in the August shows were well up to average; cattle and sheep were generally free from disease. *Clip of Wool*—Average, of good-quality wool.

SHEETLAND. *Wheat*—None grown. *Bere*—Grain, 12 to 15 cwt. per acre; straw, 15 to 18 cwt. per acre; average crop; seed sown, 2 to 3 bushels per acre. *Oats*—Grain yield very variable, owing to severe gales during harvesting, and losses due to delayed leading; losses in some cases estimated to be as high as 75 per cent; grain, 6 to 26 qrs. per acre; average in the region of 15 to 20 qrs. per acre; straw, 20 to 30 cwt. per acre; quality satisfactory; seed sown, Shetland Oats, about 3 bushels per acre;

Yielder, up to 7 bushels per acre; Yielder has larger acreage than any other single variety. *Harvest*—Exceptionally difficult; early-cut crops were secured fairly easily, but heavy gales and rain protracted completion of the harvest; there were heavy losses of grain in many cases. *Hay*—20 to 35 cwt. per acre; crop was good until cutting time, when bad weather caused early-cut hay to become spoiled and the remainder of the crop was cut too late to have much value, but secured in good condition; very little good hay was made. *Meadow Hay*—Yield was greater than last year, and all except late cutting were secured in good condition. *Potatoes*—About 8 tons per acre on an average; yields of 20 tons per acre were recorded; there was no evidence of blight or other serious disease; there was a little frost damage during the harvest; variety trials were carried out with Home Guard, Dunbar Rover, Dunbar Standard, and Redskin compared with Kerr's Pink and Arran Chief. *Turnips*—Yield varied from 12 to 25 tons per acre. There was widespread damage by turnip root-fly, causing an almost complete loss in some crops. *Insects*—Cabbage still attacked by cabbage white butterfly, but not so serious as last year; turnips badly attacked by turnip root-fly; in some cases there are complaints of attacks on potatoes by grubs of Ghost Swift moth. *Weeds*—No abnormal trouble. *Pastures*—Growth was good throughout the year. *Live Stock*—Generally did well; sheep were in good condition following a mild, open winter; cattle and sheep generally free from disease. *Clip of Wool*—Quantity and quality both satisfactory; a heavier fleece generally gave a stronger wool.

THE WEATHER OF SCOTLAND IN 1948.

By R. A. WATSON, B.A.

THIS report consists of (1) a general description of the weather from month to month, and (2) a selection of rainfall returns in which each county of Scotland is represented by one or more stations. Temperature readings, unless otherwise stated, are from thermometers exposed in the regulation "Stevenson screen."

JANUARY.

Generally, January was very unsettled, stormy and wet, with depressions more frequently taking a southerly track across England than is usual. The mean barometric pressure over all the British Isles was low and over many parts of England was the lowest for a very long time. Gales were very frequent on all coasts and were at times severe. A gust of 81 m.p.h. was recorded on the Bell Rock on the 11th, and on the same day the average speed there never fell below 55 m.p.h., with frequent gusts of over 70 m.p.h.

Usually a stormy winter month is a mild month, but January proved an exception to this rule. The mean temperature for Scotland was somewhat below normal, although there occurred no long cold spells. The warmest weather occurred during the first two or three days, when the temperature rose to 55° F. in Kilmarnock and Edinburgh and 54° F. at Dunbar, Prestwick, and Glenlee. After this, the temperature was generally low but very variable, until the last week of the month. Temperature failed to exceed freezing-point at Dalwhinnie and Dyce on the 9th, and at Fort William and Glenlivet on the 23rd. Screen temperatures fell to 6° and 7° F. at Balmoral and Braemar on the nights of the 24th and 25th, and a temperature of 0° F. (32° of frost) was recorded at Balmoral by a thermometer exposed on the ground on the same night. The Balmoral temperatures were the lowest recorded in Scotland during the year.

Rainfall in the extreme north was about average, but elsewhere far exceeded it. In the south-east three times the average was recorded and Edinburgh's total, 5.27 inches, was the highest recorded there in January for eighty-one years. Days without rain were rare in most places, and in fact did not occur at all in some localities.

Snow was reported from some place or other on every day after the 5th. A fall of 10 inches in Caithness on the 9th was probably the heaviest of the year. Widespread falls occurred on the 17th-18th, and drifting to 5 or 6 feet blocked roads in Perthshire.

Sunshine was deficient in all areas except the extreme north. The only places recording 50 hours or more were Lossiemouth (56), Fortrose (50), Gordon Castle (50). Several places only recorded half the normal for the month.

FEBRUARY.

The stormy, unsettled but mild type of weather, with a succession of Atlantic depressions crossing over or near the British Isles which had persisted throughout January, continued into the first half of February, but then changed to the opposite type with an anti-cyclone over Scandinavia and resulting cold easterly winds and mainly dry weather. During gales early in the month gusts of over 80 m.p.h. were recorded at Renfrew, the Bell Rock, and Edinburgh.

The mean temperature for the month was a little above normal, the mildness of the first half more than balancing the cold of the latter part. This was in marked contrast with the extreme cold of the previous February, when the mean was almost 10° F. lower. No outstanding high temperatures were recorded, but a number of places reached 54° F. during the first fortnight, and the nights were generally mild. During the latter half of the month several days occurred on which the temperature barely exceeded 32° F. and keen frost was registered at night, especially from 27th to 29th. During these nights screen temperatures at stations in the Spey and Dee valleys fell to 15°-17° F. and ground temperatures to 7°-12° F.

Over the country as a whole, rainfall was considerably over the average, but in the coastal areas round and to the north of Aberdeen and locally in the south there was a deficiency. North of the Great Glen rainfall was only about the normal. Some very wet days occurred in the first fortnight and a considerable number of observers reported falls of over two inches in the twenty-four hours. Extensive flooding was reported from the Tay valley following heavy rains on the 1st and 2nd. In the second half of the month precipitation was largely in the form of snow, but was not heavy. Scotland escaped the really heavy falls suffered by England on the 20th and 21st, when drifts of four to five feet were experienced in the London area.

The amounts of sunshine varied considerably. Some places in Banff, Moray, and on the Ayrshire coast with totals of over 80 hours exceeded the normal for the month, but in general the month was rather dull.

MARCH.

The British Isles were mainly under the influence of large anti-cyclones during the month and the resulting weather was distinctly warm—March 1948 was amongst the three warmest March's in

Scotland in this century. It was also very sunny. Occasional days of heavy rain in the north and north-west were caused by depressions skirting our northern shores, so that while rainfall was deficient in the east it was excessive in the north-west. During the passage of these depressions the wind rose to gale force on several occasions.

The excess of temperature over normal was 4.6° F. for the country as a whole. During a week of remarkable summer-like weather beginning on 21st day, maxima of 65° to 70° were registered in most areas. Maxima of 71° F. at Strathy and 70° F. at Achna-shellach on the 26th approached very near the limit which has ever been reached in March in those districts. A few nights of frost occurred; the lowest screen readings recorded were 20° F. at Balmoral on the 1st, and 21° F. at Braemar and Peebles on the 6th.

The distribution of rain over Scotland presented some curious features. A long strip near the east coast from Banff southwards had less than 1 inch of rain, but places in the West and Central Highlands had over 12 inches. Thus Gordon Castle had 0.48 inch, which is only 21 per cent of the normal, and Glenquoich had 12.26 inches, 126 per cent of its normal for the month. Very little of the precipitation fell in the form of snow, but there were a few showers during the third week of the month.

The number of hours of bright sunshine was considerably above normal in almost all districts. Gordon Castle and Fochabers each enjoyed 176 hours during the month and other places in the north-east had over 150 hours.

APRIL.

The month was generally sunny and warm, with very variable rainfall.

The warmest days occurred about the 23rd to 25th, when the temperature reached 67° F. at Craibstone and Prestwick and 66° F. at North Berwick and Turnberry. A few days later the temperature dropped abruptly with the influx of cold air from Arctic regions, and stations on the Spey and Dee registered screen minima of 19° to 22° F., while the ground temperature at Dalwhinnie fell to 13° F., an unusually low reading for the extreme end of April.

Rainfall was very variable but on the whole above average for April. The east and the south-west of the country had less than the average and other districts more. There were no outstanding falls. Snow occurred generally in the cold snap at the end of the month.

Sunshine was abundant in most areas, and, with the exception of 1942, was the sunniest on record in many places. Leading aggregates were Leuchars 193 hours, Arbroath 191, St Andrews 189, and Craibstone 188.

MAY.

May produced weather even more mixed than is usual in this spring month, but was consistently sunny in all districts.

An exceptional range of temperature occurred. Sandwiched between two cold snaps in the first few days and round the 25th, when sharp frosts were registered over wide areas, a very warm spell occurred from the 17th to 19th, during which the temperature exceeded 80° F. in some places. Kilmarnock had a maximum on the 18th of 84° F., which is the highest May temperature recorded in Scotland for sixty-seven years.

Although rainfall was below average over most of the country, and particularly so in the west, where only about 50 per cent of the normal fell, there were some areas in the east around Inverness and Dundee with more than twice the normal. There were few really heavy falls exceeding an inch in the day, but smart showers occurred during thunderstorms, particularly towards the close of the month. Snow fell and lay to a depth of four inches at Braemar on the 24th.

Outstanding records of sunshine were made in a number of places, especially in the west: Tisee totalled 275 hours in the month, Turnberry 274, and Oban 273. The largest total ever reached since recording began in 1922 was reached at Lerwick with 271 hours.

JUNE.

June was a disappointing summer month. Two short spells, near the middle and around the 24th, gave promise of more settled weather, but both quickly broke down. The latter one, however, included part of the Society's Inverness Show. Sunshine was distinctly less than normal and rainfall appreciably more. A severe gale for the time of year occurred on the 6th-7th, during which a gust of 78 m.p.h. was registered at Bell Rock.

Temperature was only a little below normal over the country as a whole. An impression of coolness was conveyed by the absence of any really warm spell. No place in Scotland reached 80° F. throughout the month, although many approached it during the fine spell from the 9th to 14th. Ground frosts were reported from a few places on five nights, the lowest ground temperature being 27° F. at Glenlivet and Dalwhinnie on the night of the 17th-18th.

Rainfall everywhere exceeded the average except in the extreme north, and, for the country as a whole, it was the wettest June for a considerable number of years. At Paisley 5.84 inches was the highest rainfall for fifty years. Thunderstorms were more frequent than usual and flooding occurred locally during intense downpours.

Sunshine was everywhere deficient except in the extreme north. The best totals for the month were 80 or 90 hours short of the best in May. They came from the east coast and the extreme north.

JULY.

The cool, dull, and rainy weather which had characterised June continued with little interruption until the last week, when a spell of extreme warmth occurred, bringing the mean temperature for the month nearly up to the seasonal average. No days approaching summer heat were experienced until this hot spell, which produced a temperature of 90° F. on the 29th at Kilmarnock, Prestwick, and Ruthwell, only 1° below the "record" for a screen temperature in Scotland. Fort William registered 86° F. on the 30th, the highest temperature there since 1888.

Rainfall was not much above average for the month as a whole but was very unevenly distributed. The extreme north-east and south-east were drier than usual, while Central and West Scotland had moderately heavy rain. Thunderstorms were fairly frequent, especially on the 15th, and those at the break-up of the hot spell on the 31st were very severe and caused considerable damage, both directly from lightning and from flooding.

The long hours of bright sunshine of the last six days, totalling 60-70 hours in many places, compensated the previous dull weather, and monthly aggregates in general were nearly normal. The best records were from the east and south-west coasts and amounted to about 200 hours.

AUGUST.

The summer of 1948 up to August had proved disappointing. August, however, provided real disaster in the floods of the Tweed and the coastal streams of Berwickshire and the Lothians.

Apart from the first day when a temperature of 78° F. was recorded at Leuchars, and a few warm days towards the end of the month, the temperature was persistently low in marked contrast to the previous August. Screen temperatures fell to freezing-point or below at Glenlivet and Balmoral on the night of the 20th-21st, and sharp ground frosts occurred on this night.

Rainfall was in excess of the normal in all districts except the extreme north and locally in the west. Many places registered their heaviest August rainfall ever recorded, including Edinburgh and Perth. Edinburgh's total (9.40 inches) has only once been exceeded in any month (September 1785) since records are available (1770). The rains leading to the disastrous floods on the 13th may be said to have started on the 6th. Indeed, two-thirds of monthly totals fell in the six days from the 6th-12th. On the 12th an area of some thousands of square miles centred in the Tweed valley received more than 2 inches of rain. The largest fall reported was 6.21 inches at Kelso, and numbers of gauges recorded between 4 and 5 inches. This fall, coming on the top of previous excessive rains, did immense damage. Direct estimates have run into seven figure numbers of pounds. The rainfall was without precedent in

Scotland since reasonably accurate estimates have been available, but that causing the Moray floods in August 1829 may have been comparable, as are falls in Somerset in 1917 and Norwich in 1912.

Sunshine was notably deficient and some places had the smallest August total for thirty years. North Berwick, the sunniest station, could only total 125 hours in contrast to 310 hours at the best stations in August 1947.

SEPTEMBER.

West to south-west winds were more persistent even than usual, with a succession of Atlantic depressions skirting our western and northern seaboard. Generally, unsettled and wet weather resulted, but a few places in the east had less than their normal September rainfall. Gales were frequent and severe, notably on the 26th to 28th in all districts and in the north-west on the 6th to 8th.

The weather was generally mild but with a remarkable absence of really warm days. The highest temperature recorded (at Gordon Castle and Lossiemouth) only reached 70° F. During a cold snap from the 19th to 23rd some frosts occurred, and ground frosts were common and severe.

Rainfall was abundant and persistent in the west. Some stations recorded rain on every day of the month. At Fort William 13·78 inches made a total which has only been exceeded twice in September in seventy-three years (1879 and 1892). In the Dee valley and other places in the east of the country rainfall failed to reach the average.

OCTOBER.

Rather frequent gales occurred at times, and those of the 19th to 25th were severe, with gusts between 70 and 90 m.p.h. reported from Lerwick, Stornoway, Wick, and Bell Rock.

Although there were two short cold spells after the 21st, the month as a whole was rather mild. The first few days were the warmest and temperatures of 65° F. to 67° F. were registered at places from Strathly in Sutherland to St Abb's Head in Berwickshire. By contrast on the 28th, the temperature at Dalwhinnie fell to 11° F., the lowest reading from Scotland in October since 1880. Ground frosts were widespread in the latter part of the month, and 25° F. of frost on the ground was recorded at Glenlivet on the 27th.

Over the country as a whole, precipitation was considerably in excess of the average, double in some parts, but there was a deficiency in the Edinburgh area and Deeside and in other places in the east. Some of the heaviest falls in one day were 3·60 inches at Ardgour, 3·48 inches at Kinlochquoich, and 3·15 inches at Gairloch, all on the 1st. During the cold spell from 25th to 28th snow fell over a considerable area, but not in large quantities.

Sunshine totals were good for October in the drier eastern districts, Craibstone and Montrose heading the list with 118 hours.

NOVEMBER.

The month was mainly notable for its general mildness and fog in the last third, which in places was very persistent, although Scotland did not suffer from fog as much as England.

Over the country as a whole the mean temperature was 3.2° F. over the average. An excess of this magnitude is not common. The temperature frequency rose to about 60° F., and on the warmest day, the 14th, exceeded it by 1° at a few places in the south. Towards the end of the month some days occurred when the temperature failed to exceed freezing-point, and severe frosts occurred at night. During the foggy period curious anomalies from closely neighbouring stations were observed. A low-lying station would be engulfed in the fog all day with its temperature never rising above freezing-point, whilst its neighbour, on a small elevation above the fog, would have brilliant sunshine and a comparatively high temperature.

Rainfall in the west was near the average, but in the east the month was very dry.

Sunshine on the whole was not very different from normal, but locally, where the fog had been very persistent, the records were very poor. As has been mentioned above, closely neighbouring stations showed considerable differences in their records on some days.

DECEMBER.

The first half of the month was notably mild everywhere and very wet in the west. Drier and colder conditions were prevalent later until the last few days.

On the 2nd, the warmest day, the temperature rose to 65° F. at Achnashellach, which is the highest December temperature recorded in Scotland for sixty years. In other parts of Scotland local "records" were established on the same day. After the establishment of colder weather on the 16th, days on which the maximum temperature over wide areas did not exceed 32° F. appeared very cold indeed. During this colder weather a minimum of 18 degrees of frost (14° F.) was registered at Braemar.

Rainfall was very variable, although on the whole it was above average. Across Central Scotland it was far in excess of the average, but both north and south of this belt there were areas with a small deficiency. There were frequent snow showers in the second half of the month, but no falls of note took place.

Bright sunshine was not very different from the average. It mostly occurred in the drier, colder weather of the second half of the month.

RAINFALL (MEASURED IN INCHES) FOR 1948

AT SELECTED STATIONS IN SCOTLAND.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Shetland—Lerwick	4.79	3.54	2.68	3.01	1.85	1.90	3.22	2.17	5.64	5.79	4.39	5.74	44.72
Calthness—Wick	3.95	2.29	1.07	1.62	1.69	2.87	1.74	2.94	3.10	4.33	2.20	2.98	30.78
Sutherland—Melvich	4.00	2.76	1.48	2.08	1.39	1.95	2.42	3.10	3.58	4.75	2.74	2.89	33.14
Lairg	5.58	2.90	2.98	3.06	2.44	3.19	1.84	3.71	3.61	4.66	3.86	4.06	41.89
Ross and Cromarty—													
Fortrose	2.55	2.38	1.62	2.16	2.77	3.79	2.22	3.98	1.87	2.50	1.74	2.18	29.76
Stromeferry (Achmore)	5.31	6.47	5.30	5.23	1.79	4.11	4.31	7.01	10.11	8.58	8.71	8.20	75.13
Stornoway	5.45	4.52	3.08	3.88	1.22	2.16	2.63	3.79	7.18	4.85	4.26	5.90	48.92
Inverness—													
Inverness	2.69	3.13	1.44	2.27	4.13	4.37	3.17	6.06	2.24	2.49	1.87	3.16	37.02
Fort William	7.95	8.51	9.18	6.64	1.42	5.53	7.05	8.51	13.78	12.59	7.47	9.73	98.30
Glenquoich	13.28	9.18	12.26	8.06	3.18	7.29	7.92	7.90	15.65	14.86	11.10	13.36	124.04
Portree	7.67	6.70	7.76	4.78	2.43	4.78	5.30	7.36	11.38	9.02	10.49	9.78	87.45
Nairn—Nairn	2.23	1.75	1.09	2.38	2.42	3.99	2.24	4.30	2.12	2.34	1.57	1.93	28.36
Meray—Gordon Castle	1.24	1.03	.48	1.58	1.92	4.88	3.30	7.04	2.57	3.24	1.79	2.12	31.19
Kellas House	2.31	1.40	.82	3.13	2.31	6.39	3.71	9.70	2.57	2.97	1.85	2.75	39.91
Banff—Banff	3.18	1.30	.49	1.78	1.80	5.41	2.13	4.69	1.89	3.46	1.69	2.18	30.00
Aberdeen—Peterhead	3.97	1.15	.82	1.61	2.55	4.73	2.84	3.26	2.47	3.98	1.56	3.13	32.07
Craigstone	4.70	1.04	.87	1.52	3.44	5.07	2.69	4.52	1.81	3.97	1.08	3.86	34.57
Balmoral	3.71	3.03	1.99	1.55	3.46	5.34	2.53	5.73	1.80	1.90	.82	4.62	36.48
Kincardine—Fordoun	6.09	2.43	.94	1.15	3.05	4.23	1.96	3.77	1.94	2.74	1.23	4.41	34.84
Angus—													
Montrose (Asylum)	3.85	2.16	.59	1.00	3.21	3.73	2.50	5.50	1.93	2.83	1.03	3.89	32.28
Dundee	4.85	2.68	.97	1.65	4.77	3.70	3.10	6.80	3.07	3.50	1.31	3.78	40.16
Glamis Castle	5.36	2.82	1.04	1.17	3.41	4.00	3.74	7.99	3.09	3.00	1.01	5.05	42.58
Brechin	4.75	2.35	.89	.97	3.55	3.75	2.76	6.13	2.20	3.68	1.34	4.56	36.93
Perth—Blair Castle	5.74	4.26	3.15	1.73	3.17	3.49	1.93	7.24	3.56	3.91	2.07	6.84	47.09
Orfif	5.31	5.73	2.52	1.40	2.12	4.80	2.76	7.56	3.02	4.76	3.10	7.21	50.29
Perth	4.37	3.20	1.06	1.28	2.36	3.56	4.44	7.86	2.98	3.47	1.60	4.85	41.53
Fife—Dunpar	5.36	2.57	.92	1.39	2.74	4.30	1.88	6.55	2.77	3.24	1.35	3.43	36.50
Kirkcaldy	4.42	2.38	.78	1.43	2.29	3.54	2.02	7.30	3.98	3.17	2.37	3.09	35.77
Kinross—Loch Leven	5.72	4.09	1.66	2.21	3.10	4.93	3.55	8.06	4.11	3.63	2.65	4.83	48.09
Clackmannan—													
Tillicoultry	6.08	4.04	1.86	2.67	3.20	5.02	3.01	7.43	4.29	4.45	3.09	4.44	49.58
Argyll—Gruline (Mull)	8.32	7.43	7.35	4.56	1.62	5.82	5.89	6.75	12.33	11.69	6.21	14.94	92.91
Oban	8.07	6.62	5.59	5.18	1.77	4.33	4.36	9.98	9.59	10.17	6.01	8.51	76.18
Kinlochleven	9.66	11.14	9.65	7.50	1.92	9.34	7.56	10.10	14.21	12.75	8.66	15.99	118.48
Inveraray	11.90	9.57	9.45	6.73	2.96	7.32	6.66	9.75	13.86	17.24	7.83	10.78	114.05
Bute—Rothsay	7.14	5.18	4.19	2.80	1.70	5.16	4.95	7.71	8.39	10.56	4.69	7.71	70.18
Stirling—Stirling	6.49	3.96	3.08	2.67	2.06	4.76	3.66	6.53	5.68	3.42	2.88	5.65	50.82
Dumbarton—													
Garelochhead	12.68	9.71	7.54	5.00	2.86	4.91	5.42	10.86	10.89	12.48	6.29	12.92	101.56
Helensburgh	14.50	9.00	9.30	3.40	1.09	8.00	6.00	11.00	12.50	14.00	5.50	10.00	104.29
Renfrew—Greenock	9.88	7.77	6.82	3.76	1.87	5.72	6.04	7.84	8.64	10.73	5.40	9.05	83.62
Paisley	6.61	5.01	4.23	3.09	1.57	5.84	3.16	6.58	5.84	4.88	3.69	6.22	56.72
Ayr—Kilmarnock	7.57	3.74	3.80	2.83	1.59	6.75	4.07	6.83	6.75	6.22	3.62	4.87	58.64
Prestwick	6.15	2.41	3.24	1.99	1.20	5.56	2.71	5.24	5.28	4.25	2.70	4.06	44.79
Muirkirk	8.15	3.65	4.92	4.02	1.14	5.19	3.66	5.30	5.16	5.75	4.25	6.64	57.83
Colmonell	7.40	2.11	3.63	1.51	.95	4.15	2.91	3.53	4.69	5.86	2.75	6.11	45.60
Lanark—													
Glasgow (Botanic Gdns.)	5.30	3.82	2.90	2.97	1.20	4.38	2.62	6.42	6.03	4.38	3.29	5.67	48.98
Douglas (Newmaine)	7.04	3.59	3.29	3.99	1.06	4.32	2.55	6.02	4.74	3.11	3.12	5.92	48.75
Bigger	5.31	3.12	2.68	3.10	1.35	5.26	3.70	6.40	4.66	2.26	3.02	4.85	45.71
Linlithgow—													
Houston House	6.72	3.02	1.85	2.22	1.69	5.17	3.12	7.26	4.00	3.18	3.76	3.13	45.12
Midlothian—													
Edinburgh	5.27	2.14	1.06	1.48	2.34	4.02	1.94	9.40	2.58	1.61	2.33	2.20	36.87
Newbattle	5.48	2.24	1.06	2.00	2.04	3.96	1.86	9.92	2.44	1.28	1.98	2.13	36.84
Haddington—													
North Berwick	5.47	1.57	.45	1.35	1.38	2.48	1.21	7.68	2.72	2.50	1.92	1.44	30.17
West Hopes	6.85	2.28	1.08	2.19	1.88	4.52	2.52	12.23	3.29	3.29	1.74	3.60	45.47
Berwick—Duns Castle	6.96	1.69	.51	1.83	1.77	4.35	2.31	10.94	2.71	3.13	1.82	1.96	39.98
Marchmont	7.08	1.69	.63	1.96	1.87	3.57	1.56	9.57	2.39	3.14	1.87	2.10	37.43
Peebles—West Linton	7.32	3.15	2.06	3.46	2.00	4.90	3.14	8.36	4.22	3.44	2.48	4.63	49.16
Selkirk—Caddonfoot													
(Fairlie Gardens)	7.98	2.99	1.57	2.70	1.89	3.87	1.41	7.86	2.93	2.35	2.03	4.06	41.64
Roxburgh—													
Kelso	6.04	1.64	.78	2.23	1.33	4.39	1.13	10.46	2.42	2.44	1.82	1.88	36.56
Lauder (The Roan)	7.15	2.04	.86	2.12	2.43	3.71	1.41	7.34	2.35	2.69	1.57	3.58	37.25
Dumfries—Dumfries	7.43	3.48	2.79	3.56	2.33	6.00	2.79	7.63	4.93	3.44	4.15	6.09	54.62
Langholm	8.94	5.07	3.79	3.72	2.13	6.84	2.97	8.87	6.63	5.60	6.71	6.42	67.69
Ekdalemuir	10.24	5.83	4.53	4.41	1.77	6.93	3.99	10.00	6.87	5.97	5.30	7.89	73.73
Kirkcudbright—Castle													
Douglas (Dorblston)	7.82	3.67	3.85	2.67	1.92	4.95	3.08	6.61	6.23	4.16	5.24	5.74	55.94
Carrphairn (Dornharrow)	10.40	5.40	4.79	2.98	2.29	6.32	8.07	7.11	6.68	5.66	4.38	5.77	67.65
Auchencoln	9.43	8.43	4.00	2.90	2.83	5.49	3.35	6.64	6.88	5.59	7.03	5.53	68.15
Wigtown—Monreith	7.63	1.96	1.39	1.73	.92	4.19	2.64	3.52	4.72	5.17	4.43	4.41	42.71

AGRICULTURAL STATISTICS.

TABLES 1 TO 8.

THE detailed information regarding the acreages under crops and grass, yields per acre, total produce and numbers of livestock for each county of Scotland, which formerly appeared in Tables 1 to 8, is not yet available for the years 1939-48.

TABLE No. 9.—QUANTITY AND VALUE OF CORN, &C., IMPORTED INTO THE UNITED KINGDOM
IN THE UNDERMENTIONED YEARS.

[From Trade and Navigation Returns.]

	Quantities.				Values.			
	1938.	1947.	1948.		1938.	1947.	1948.	
	Cwt.	U.S. Tons	U.S. Tons		£	\$	\$	
— In (other than grain for								
Wheat	01,626,356	3,907,988	650,923		38,627,554	386,027	574,678	
Barley	19,875,622	2,258,939	618,248		6,849,732	862,066	24,499,278	
Oats	1,575,721	2,118,267	878,569		17,520	286,392	9,431,417	
Rice	7,681,046	9,614,134	642,841		17,932	418,854	37,613,860	
Peas, hulled or cleaned	2,671,216	92,705	845,262		1,925	200,768	1,810,956	
Beans, not fresh	1,945,811	703,694	303,112		1,091	454,463	653,310	
Beans, not fresh	855,591	542,080	353,271		1,220	821,370	1,052,010	
lentils	280,673	178,261	170,109		5,269	307,911	350,523	
Other kinds of grain	140,962				5,349			
Products of the milling and								
Wheat products—								
Meal and flour	1,676,749	883,680	221,314		3,988	309,070	5,539,963	
All other descriptions	331,820	1,831	663		13,189	3,887	2,122	
Starch products	596,753	187,822	171,026		2,592	417,800	378,091	
Rice products	1,850,011	743,030	648,424		1,735	459,697	1,421,683	
Flour and meal of other cereals	76,707	26,838	310		13,292	70,578	3,077	
Starchaceous substances, for use	698,859	684,179	710,580		14,080	387,698	2,351,963	
Starch articles, under grain and	270,753	33,621	182,591		17,369	111,571	596,221	
Total of Group		9,951						

TABLE NO. 10.—SUMMARY OF TOTAL VALUES APPEARING IN TABLE NO. 9
OF GRAIN AND FLOUR IMPORTED INTO THE UNITED KINGDOM IN THE
UNDERMENTIONED YEARS.

	1938.	1947.	1948.
From—	£	£	£
Union of South Africa	1,540,071	21,941	106,970
Southern Rhodesia	208,936	..	2
Kenya	194,805	1,238	1,725
India, Pakistan, &c.	1,909,975	7,437	5,617
Burma	684,915	98,612	1,415,528
British Malaya	195,024	1,314,202	2,275,772
Australia	14,392,095	4,156,938	40,266,251
New Zealand	46,904	175,559	210,538
Canada	18,592,293	89,274,914	85,639,121
Anglo-Egyptian Sudan . . . . .	..	..	67
Other British countries	187,204	53,060	104,818
Soviet Union	4,187,343	..	21,632,128
Netherlands	1,461,651	649,673	1,480,270
Madagascar	114,420	74,986	..
Iraq	991,342	178	67
United States of America	15,602,821	19,338,478	285,921
Chile	183,558	1	559,261
Brazil	150,558	731,705	40,621
Argentine Republic	8,190,189	23,863,965	43,301,517
Other foreign countries	5,584,234	1,885,255	3,952,958
	74,418,338	141,648,142	201,279,152

TABLE NO. 11.—SUMMARY OF TOTAL VALUES APPEARING IN TABLE NO. 14
OF DAIRY PRODUCE IMPORTED INTO THE UNITED KINGDOM IN THE
UNDERMENTIONED YEARS.

	1938.	1947.	1948.
From—	£	£	£
Eire	3,326,631	2,410,267	4,858,607
Union of South Africa	376,575	13	136,069
Australia	11,114,163	15,878,182	22,124,572
New Zealand	20,378,696	33,110,826	42,395,802
Canada	3,008,040	14,515,941	13,219,946
Other British countries	244,909	85,566	211,150
Sweden	1,737,371	65	7,066
Denmark	18,059,459	13,644,724	25,650,944
Poland	1,848,545	277,842	1,306,362
Netherlands	8,521,114	2,212,691	6,478,972
France	99,643	455,916	779,788
China	2,977,406	711,236	3,342,180
United States of America	153,852	40,693,103	7,866,795
Argentine Republic	721,704	514,767	1,377,163
Other foreign countries	7,445,868	45,237	2,296,795
	80,013,976	124,556,376	132,052,211

TABLE NO. 12.—QUANTITIES AND VALUES OF MEAT OF ALL KINDS IMPORTED INTO THE UNITED KINGDOM
IN THE UNDERMENTIONED YEARS.

	Quantities.			Values.		
	1938.	1947.	1948.	1938.	1947.	1948.
BEEF :—						
Fresh and salted	Cwt. 5,461	Cwt. 149,780	Cwt. 61,281	£ 7,504	£ 925,361	£ 338,498
Chilled	8,963,501	1,836	483	17,676,352	12,686	2,407
Frozen—						
Fore and hind-quarters	1,630,443	5,994,941	5,944,726	2,632,342	24,227,197	21,451,153
Boned and boneless	911,947	3,904,463	1,504,524	1,609,177	15,926,419	6,260,721
Tongues and other descriptions	754,768	599,446	351,436	1,775,775	2,313,486	2,056,926
Tinned, canned, &c.—						
Tongues	83,327	80,310	45,088	733,145	1,250,474	699,770
Other descriptions	1,000,321	2,727,436	915,379	2,665,972	17,450,446	5,654,516
VBL, including fresh, chilled, frozen, tinned, canned	433,283	467,292	400,902	1,108,010	3,732,549	2,945,204
MUTTON and Lamb :—						
Fresh	24,047	..	..	86,661	..	1
Chilled or frozen—						
Mutton	1,604,916	2,334,880	1,795,582	2,810,483	6,788,655	5,653,371
Lamb	5,283,921	6,195,911	5,983,221	16,386,012	29,200,982	28,870,580
Other descriptions	225,851	286,742	256,789	662,966	1,360,844	1,264,265
Tinned, canned, &c.	118,490	318,649	64,266	333,496	2,258,723	413,393
PIG PRODUCTS :—						
Bacon	6,867,915	2,634,806	2,668,527	30,920,940	20,946,042	27,882,393
Hams	664,321	1,601	24,924	3,015,391	12,086	253,470
Pork—						
Fresh	36,844	286,938	223,351	129,431	1,655,757	1,238,895
Chilled or frozen	1,180,866	286,938	223,351	3,630,644	..	..
Salted, pickled, &c.	10,961	239	506	35,882	2,330	5,766
Other descriptions	183,176	219,464	265,506	418,001	956,603	1,368,218
Tinned, canned, &c., of all descriptions	170,846	247,588	192,398	1,218,902	2,512,219	2,408,600
RAVENS, fresh and frozen	253,032	444,125	641,008	452,017	1,633,295	2,189,223
POULTRY (dead), all kinds	446,103	599,415	498,309	1,741,692	7,197,961	7,635,860
GAMES (dead), fresh, chilled, or frozen	25,356	13,484	22,239	117,373	194,323	196,491
EXTRACTS and essences	66,412	144,852	156,869	374,094	3,408,179	3,286,393
SAUSAGES of all kinds, other than tinned, canned, &c.	2,921	22,232	9,273	19,793	339,252	152,265
POULTRY and meat pastes, &c.; sausages, tinned, canned; meat pies	10,337	254,765	73,697	57,894	2,206,495	749,273
ALL other kinds	5,176	131,342	348,147	11,920	860,641	2,694,734
TOTAL	30,963,142	28,062,537	22,548,431	90,679,859	147,284,915	125,652,306

TABLE NO. 13.—SUMMARY OF TOTAL VALUES IN TABLE 12 OF MEAT IMPORTED INTO THE UNITED KINGDOM IN THE UNDERMENTIONED YEARS.

	1938.	1947.	1948.
From—	£	£	£
Eire	3,074,061	3,345,574	4,222,381
Australia	11,000,425	17,249,533	16,526,013
New Zealand	14,680,534	29,678,102	32,720,932
Canada	6,964,856	19,536,697	22,779,638
Other British countries	294,288	1,038,847	1,671,303
Sweden	1,159,729	77,087	216,853
Iceland	93,864	82,128	99,820
Denmark	16,260,955	8,337,216	7,676,985
Poland	2,461,295	94,271	3,169,076
Netherlands	2,519,114	247,067	1,821,148
Hungary	692,635	1,650,610	2,499,431
Yugoslavia	194,812	57,916	..
United States of America	3,361,335	7,906,522	45,437
Chile	473,520	692,988	786,629
Brazil	1,585,678	1,302,343	500,980
Uruguay	2,525,163	4,058,816	2,554,271
Argentine Republic	21,262,180	49,505,509	26,652,880
Paraguay	123,661	963,554	911,091
Other foreign countries	1,951,754	1,460,135	797,438
	90,679,859	147,284,915	125,652,306

TABLE No. 14.—QUANTITIES AND VALUES OF BUTTER, MARGARINE, CHEESE, MILK PRODUCTS, AND EGGS IMPORTED INTO THE UNITED KINGDOM IN THE UNDERMENTIONED YEARS.

	Quantities.			Value.		
	1938.	1947.	1948.	1938.	1947.	1948.
BUTTER	Cwt.	Cwt.	Cwt.	£	£	£
CHEESE	9,517,913	4,325,825	5,452,829	50,873,133	42,921,810	67,843,311
Eggs in shell :—	2,927,326	3,830,029	3,144,937	9,681,245	31,512,081	27,388,935
Poultry	Th. doz.	Th. doz.	Th. doz.			
Eggs, not in shell :—	276,977	115,822	154,523	12,374,548	13,481,050	21,547,810
Liquid or frozen, &c.	Cwt.	Cwt.	Cwt.			
Dried whole	937,164	268,742	598,471	3,038,298	2,257,714	5,986,099
Dried yolk	6,357	673,759	116,436	70,650	23,763,730	3,611,178
Dried albumen	3,510	1,414	4,784	32,408	82,664	166,732
	19,539			242,491		
	Lb.	Lb.	Lb.			
LACTOSE (sugar of milk)	1,233,384	1,157,037	4,745,883	28,263	81,999	344,040
	Cwt.	Cwt.	Cwt.			
MARGARINE	108,894	755	5,473	150,214	1,839	20,270
Milk and cream :—						
Cream	52,987	1	1	251,891	38	14
Condensed milk, unsweetened	316,306	1,184,324	157,445	619,755	4,526,417	582,837
Condensed milk, sweetened—						
Whole	100,128	207,897	370,842	191,099	1,093,245	2,304,324
Separated or skimmed	1,217,718	23,442	90,357	1,638,715	71,289	351,427
Milk powder, unsweetened—						
Whole-milk powder	91,798	114,057	109,285	317,404	719,523	800,049
Skimmed milk powder	263,602	895,998	215,939	3,656,436	782,598	782,598
Buttermilk and whey powder	*	10,780	79,623	*	17,340	222,046
ALL other articles	107,712	49,380	40,385	110,569	369,201	200,571
	..	..	..	80,013,976	124,556,376	132,052,211

* Imports, if any, included under "all other articles."

EDINBURGH CORN MARKET.

STATEMENT SHOWING THE PRICES OF WHEAT, BARLEY, AND OATS
FOR THE YEAR 1948.

The Corn Sales Act of 1921 provides that all sales are to be effected by weight only, and expressed in terms of or by reference to the hundredweight of 112 lb. Experience has proved it to be convenient to quote at a price per 4½ cwt. for Wheat, 4 cwt. for Barley, and 3 cwt. for Oats.

The following statement gives a record of the year's proceedings in Edinburgh Corn Market.

1948.	WHEAT, per 4½ cwt.		BARLEY, per 4 cwt.		OATS, per 3 cwt.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
January 7	85 10½	..	105 10	84 10	55 9	53 0
" 14	85 10½	..	105 10	84 10	55 9	53 0
" 21	85 10½	..	105 10	84 10	55 9	53 0
" 28	85 10½	..	105 10	84 10	55 9	53 0
February 4	87 4½	..	105 10	84 10	56 9	54 0
" 11	87 4½	..	105 10	84 10	56 9	54 0
" 18	87 4½	..	105 10	84 10	56 9	54 0
" 25	87 4½	..	105 10	84 10	56 9	54 0
March 3	88 10½	..	105 10	84 10	56 9	54 0
" 10	88 10½	..	105 10	84 10	56 9	54 0
" 17	88 10½	..	105 10	84 10	56 9	54 0
" 24	88 10½	..	105 10	84 10	56 9	54 0
" 31	88 10½	..	105 10	84 10	56 9	54 0
April 7	90 4½	..	105 10	84 10	58 6	55 9
" 14	90 4½	..	105 10	84 10	58 6	55 9
" 21	90 4½	..	105 10	84 10	58 6	55 9
" 28	90 4½	..	105 10	84 10	58 6	55 9
May 5	90 4½	..	105 10	84 10	58 6	55 9
" 12	90 4½	..	105 10	84 10	58 6	55 9
" 19	90 4½	..	105 10	84 10	58 6	55 9
" 26	90 4½	..	105 10	84 10	58 6	55 9
June 2	91 1½	..	105 10	84 10	58 6	55 9
" 9	91 1½	..	No quotation.		58 6	55 9
" 16	91 1½	..	No quotation.		58 6	55 9
" 23	91 1½	..	No quotation.		58 6	55 9
" 30	91 1½	..	No quotation.		58 6	55 9
July 7	91 1½	..	No quotation.		58 6	55 9
" 14	91 1½	..	No quotation.		58 6	55 9
" 21	91 1½	..	No quotation.		58 6	55 9
" 28	91 1½	..	No quotation.		58 6	55 9
August 4	97 10½	..	No quotation.		59 9	54 9
" 11	97 10½	..	No quotation.		59 9	54 9
" 18	97 10½	..	No quotation.		59 9	54 9
" 25	97 10½	..	120 0	92 0	59 9	54 9
September 1	97 10½	..	120 0	92 0	59 9	54 9
" 8	97 10½	..	120 0	92 0	59 9	54 9
" 15	97 10½	..	120 0	92 0	59 9	54 9
" 22	97 10½	..	120 0	92 0	59 9	54 9
" 29	97 10½	..	120 0	92 0	59 9	54 9
October 6	102 4½	..	120 0	92 0	60 3	54 9
" 13	102 4½	..	120 0	92 0	60 3	54 9
" 20	102 4½	..	120 0	92 0	60 3	54 9
" 27	102 4½	..	120 0	92 0	60 3	54 9
November 3	102 4½	..	120 0	92 0	60 3	55 3
" 10	102 4½	..	120 0	92 0	60 3	55 3
" 17	102 4½	..	120 0	92 0	60 3	55 3
" 24	102 4½	..	120 0	92 0	60 3	55 3
December 1	103 1½	..	120 0	92 0	60 9	55 9
" 8	103 1½	..	120 0	92 0	60 9	55 9
" 15	103 1½	..	120 0	92 0	60 9	55 9
" 22	103 1½	..	120 0	92 0	60 9	55 9
" 29	103 1½	..	120 0	92 0	60 9	55 9

PRICES OF SHEEP SINCE 1818.

TABLE No. 1.—CHEVIOT SHEEP.

Year.	Wethers.		Ewes.		Lambs.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1818	28 0	to 30 0	not quoted		8 0	to 10 0
1819	25 0	" 27 0	15 0	to 17 0	10 6	" 12 0
1820	20 0	" 25 0	16 0	" 17 0	10 0	" 11 0
1821	18 0	" 20 0	14 0	" 16 0	7 6	" 8 0
1822	12 6	" 13 0	8 0	" 8 6	4 6	" 0 0
1823	13 6	" 18 0	7 0	" 10 6	5 6	" 6 0
1824	14 0	" 19 0	7 0	" 9 0	4 6	" 6 0
1825	29 0	" 32 0	15 0	" 19 0	9 0	" 10 6
1826	17 6	" 21 6	18 0	" 16 0	7 0	" 7 6
1827	15 0	" 24 0	not quoted		7 0	" 8 0
1828	18 0	" 27 6	12 0	to 15 0	7 0	" 8 6
1829	18 0	" 24 0	12 6	" 14 0	7 0	" 8 6
1830	16 0	" 21 0	8 0	" 11 0	6 0	" 6 9
1831	18 0	" 25 0	9 0	" 13 0	7 0	" 8 0
1832	19 0	" 24 0	11 0	" 16 0	7 0	" 9 0
1833	22 0	" 31 0	18 6	" 20 0	8 0	" 11 3
1834	22 0	" 31 0	18 6	" 21 0	9 0	" 11 6
1835	22 0	" 27 6	18 0	" 20 6	8 0	" 11 0
1836	24 0	" 31 6	16 0	" 19 0	10 0	" 14 0
1837	19 0	" 28 0	14 0	" 19 0	10 0	" 13 0
1838	28 0	" 30 6	17 0	" 22 0	12 0	" 14 0
1839	28 0	" 31 0	14 0	" 19 0	0 0	" 13 0
1840	24 0	" 33 0	15 0	" 23 0	7 0	" 11 6
1841	28 0	" 30 0	14 0	" 22 0	8 0	" 12 0
1842	22 6	" 28 0	18 0	" 17 0	7 6	" 10 0
1843	19 0	" 25 0	8 0	" 12 0	5 0	" 8 0
1844	21 0	" 29 0	10 0	" 16 0	8 0	" 10 6
1845	23 0	" 33 0	13 0	" 20 0	8 0	" 12 0
1846	24 0	" 33 6	14 6	" 31 6	10 0	" 14 6
1847	24 0	" 35 0	13 0	" 24 0	11 6	" 15 0
1848	23 0	" 34 6	13 0	" 28 0	11 6	" 15 0
1849	21 0	" 30 2	12 0	" 21 0	0 0	" 14 0
1850	20 6	" 29 6	12 0	" 20 0	8 0	" 13 0
1851	21 6	" 31 0	13 0	" 21 0	8 0	" 14 0
1852	21 0	" 32 0	15 0	" 23 0	8 0	" 14 0
1853	26 6	" 38 0	17 0	" 28 6	9 0	" 17 0
1854	25 0	" 36 0	17 0	" 26 0	9 0	" 16 6
1855	23 6	" 36 0	16 0	" 25 0	10 0	" 17 0
1856	22 0	" 35 6	15 6	" 24 0	10 0	" 15 0
1857	24 0	" 36 0	14 6	" 26 0	10 6	" 14 6
1858	24 0	" 34 6	14 0	" 24 6	10 6	" 14 0
1859	25 0	" 34 6	16 0	" 25 0	10 3	" 14 9
1860	26 0	" 38 0	17 6	" 27 6	12 6	" 17 6
1861	25 0	" 38 6	16 0	" 28 0	9 0	" 16 0
1862	27 0	" 37 6	17 6	" 28 0	10 0	" 16 0
1863	25 0	" 38 6	19 0	" 28 6	10 6	" 16 0
1864	31 0	" 41 0	21 0	" 31 6	14 0	" 18 0
1865	32 6	" 44 0	22 6	" 33 6	14 6	" 20 0
1866	37 0	" 50 0	29 0	" 42 6	15 0	" 26 0
1867	26 0	" 58 0	18 0	" 35 6	12 0	" 16 0
1868	30 0	" 32 0	15 6	" 31 0	7 6	" 13 0
1869	28 0	" 38 0	15 0	" 22 6	7 6	" 14 0
1870	25 6	" 43 0	18 0	" 38 0	10 0	" 17 0
1871	26 6	" 49 0	22 0	" 33 6	14 0	" 20 0
1872	45 0	" 56 0	22 0	" 42 0	16 0	" 22 0
1873	42 0	" 51 0	25 0	" 42 0	15 6	" 22 0
1874	23 6	" 44 6	21 0	" 36 0	12 0	" 17 0
1875	23 0	" 48 6	21 0	" 34 6	13 6	" 23 6
1876	40 0	" 52 6	28 0	" 39 0	15 0	" 25 0
1877	41 0	" 51 0	25 0	" 37 0	15 0	" 24 0
1878	35 6	" 48 0	23 6	" 35 0	14 0	" 22 0
1879	34 0	" 44 0	21 0	" 34 0	14 0	" 20 0
1880	30 0	" 43 6	20 0	" 30 0	12 6	" 20 0
1881	22 0	" 45 6	20 0	" 34 6	14 0	" 20 0
1882	40 0	" 51 0	30 0	" 40 0	14 0	" 20 0
1883	44 0	" 55 6	34 6	" 46 6	15 6	" 23 0

TABLE NO. 1.—CHEVIOT SHEEP—Continued.

Year.	Wethers.				Ewes.				Lambs.						
	s.	d.	to	s.	d.	s.	d.	to	s.	d.	to	s.	d.		
1884	86	0	to	47	6	29	6	to	41	6	12	6	to	20	0
1885	80	0	"	38	0	24	0	"	31	0	12	0	"	18	0
1886	82	0	"	40	0	21	0	"	29	0	12	6	"	19	0
1887	29	0	"	86	0	18	0	"	26	0	11	0	"	16	6
1888	80	0	"	38	0	19	0	"	27	0	12	0	"	17	6
1889	86	0	"	44	0	24	0	"	32	0	14	0	"	22	0
1890	81	0	"	40	0	22	0	"	30	0	12	6	"	20	0
1891	27	0	"	88	0	16	0	"	25	0	9	0	"	16	0
1892	22	0	"	80	6	13	0	"	22	0	5	0	"	11	0
1893	20	0	"	35	6	18	0	"	28	6	8	6	"	15	0
1894	26	0	"	37	0	20	0	"	31	0	10	6	"	18	6
1895	28	0	"	39	0	22	0	"	34	0	11	6	"	19	6
1896	24	6	"	34	0	19	0	"	30	6	9	0	"	16	6
1897	27	0	"	36	0	21	0	"	31	6	11	0	"	17	6
1898	27	0	"	37	0	22	0	"	32	6	12	0	"	18	6
1899	24	0	"	33	0	20	0	"	30	6	10	6	"	16	0
1900	26	0	"	36	0	22	0	"	32	6	12	0	"	17	0
1901	25	0	"	32	6	20	0	"	29	6	11	0	"	16	0
1902	24	0	"	31	6	18	0	"	27	0	9	6	"	14	6
1903	26	0	"	34	0	21	0	"	31	0	11	4	"	18	0
1904	28	6	"	36	6	23	0	"	32	6	13	0	"	20	0
1905	27	6	"	35	0	23	0	"	33	0	14	0	"	21	0
1906	30	0	"	38	0	26	0	"	34	6	15	0	"	23	0
1907	28	0	"	34	0	22	0	"	30	6	13	6	"	19	6
1908	26	0	"	32	6	21	0	"	27	6	11	6	"	17	0
1909	24	0	"	31	0	18	0	"	26	6	9	6	"	16	0
1910	27	0	"	35	0	22	0	"	31	0	12	0	"	20	0
1911	24	0	"	31	6	18	6	"	27	6	10	6	"	18	0
1912	26	0	"	34	6	22	0	"	31	0	13	0	"	21	0
1913	30	0	"	39	0	24	0	"	35	6	16	0	"	24	0
1914	32	6	"	41	0	25	0	"	39	0	18	0	"	27	6
1915	36	0	"	46	0	31	0	"	44	0	20	0	"	30	6
1916	40	6	"	51	0	34	0	"	49	0	22	0	"	34	6
1917	43	6	"	56	0	38	0	"	56	0	24	0	"	38	0
1918	50	0	"	66	0	42	0	"	61	0	25	0	"	37	0
1919	53	0	"	69	0	44	6	"	67	0	28	0	"	40	6
1920	56	0	"	91	0	48	0	"	79	0	34	0	"	49	0
1921	45	0	"	60	0	52	3	"	86	9	38	9	"	52	3
1922	40	0	"	56	6	56	0	"	90	6	27	0	"	50	0
1923	44	0	"	65	0	61	0	"	106	0	30	0	"	62	0

Year.	Wethers.				Ewes.				Lambs.						
	s.	d.	to	s.	d.	s.	d.	to	s.	d.	to	s.	d.		
1924	41	0	to	61	0	60	0	to	100	0	81	6	to	58	0
1925	59	3	"	50	0	56	0	"	88	9	22	3	"	50	6
1926	35	0	"	49	3	34	6	"	64	6	26	3	"	42	0
1927	28	9	"	46	3	32	6	"	55	6	23	3	"	39	0
1928	28	3	"	48	6	30	6	"	55	6	22	9	"	47	9
1929	33	6	"	54	6	34	9	"	52	0	25	6	"	47	0
1930	36	0	"	54	0	35	0	"	74	6	24	0	"	47	3
1931	24	0	"	45	6	23	0	"	50	9	17	0	"	37	0
1932	16	0	"	26	6	18	0	"	36	6	10	0	"	24	6
1933	16	0	"	28	0	25	3	"	40	0	16	6	"	31	6
1934	16	0	"	34	3	22	6	"	44	6	19	6	"	33	3
1935	22	0	"	37	3	24	0	"	44	3	16	0	"	33	3
1936	24	6	"	50	0	29	0	"	55	0	18	6	"	37	6
1937	24	6	"	49	6	29	9	"	76	6	19	0	"	45	3
1938	17	0	"	39	6	20	0	"	64	0	10	9	"	31	6
1939	19	6	"	42	9	18	6	"	43	8	11	6	"	39	9
1940	31	0	"	64	0	22	6	"	60	0	15	6	"	41	0
1941	36	6	"	65	9	26	6	"	71	0	18	3	"	59	0
1942	37	0	"	67	3	33	6	"	90	0	20	6	"	59	6
1943	39	6	"	72	9	35	6	"	140	0	23	6	"	64	0
1944	42	6	"	78	0	38	6	"	145	0	25	0	"	70	0
1945	48	6	"	92	0	34	6	"	131	0	21	6	"	69	0
1946	44	6	"	91	0	34	0	"	138	0	23	0	"	76	0
1947	55	0	"	132	0	39	0	"	141	0	24	6	"	98	0
1948	71	0	"	140	0	46	0	"	144	0	31	0	"	100	0

TABLE NO. 2.—BLACKFACE SHEEP.

Year.	Wethers.		Ewes.		Lambs.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1819	22 0	to 24 0	12 0	to 15 0	5 0	to 9 0
1820	20 0	" 22 8	15 6	" 17 0	7 0	" 8 6
1821	18 0	" 20 0	12 0	" 18 0	6 0	" 7 0
1822	11 6	" 18 6	5 6	" 6 0	4 6	" 0 0
1823	12 0	" 16 0	5 0	" 6 6	4 0	" 5 8
1824	9 6	" 18 6	6 0	" 7 0	4 0	" 5 0
1825	22 0	" 26 0	11 0	" 18 6	6 0	" 9 0
1826	18 0	" 17 0	8 0	" 9 0	4 6	" 6 0
1827	14 0	" 18 6	7 0	" 10 0	6 0	" 7 6
1828	16 0	" 20 0	8 0	" 11 0	5 0	" 7 6
1829	14 0	" 18 0	9 0	" 10 0	6 0	" 7 0
1830	9 6	" 18 0	4 0	" 6 0	4 6	" 6 0
1831	13 0	" 17 0	5 0	" 7 6	5 0	" 6 6
1832	14 0	" 18 0	7 0	" 11 6	6 0	" 7 8
1833	16 0	" 24 0	7 6	" 12 0	6 6	" 9 0
1834	16 0	" 22 0	10 0	" 18 0	6 0	" 8 6
1835	15 0	" 18 9	10 0	" 18 0	7 0	" 8 0
1836	15 0	" 21 0	9 0	" 12 0	8 6	" 11 0
1837	12 0	" 16 0	8 0	" 12 0	8 0	" 9 6
1838	15 0	" 20 6	10 0	" 18 0	not quoted.	
1839	15 0	" 22 0	10 0	" 12 0	7 0	to 8 8
1840	15 0	" 22 6	11 0	" 12 0	7 0	" 9 8
1841	16 0	" 20 0	9 0	" 11 0	6 0	" 8 0
1842	14 0	" 19 0	7 6	" 8 0	5 6	" 7 0
1843	not quoted.		4 9	" 6 6	not quoted.	
1844	15 0	to 21 0	6 6	" 10 6	5 0	to 8 0
1845	14 0	" 23 0	8 0	" 12 0	6 0	" 8 0
1846	13 0	" 24 0	10 0	" 18 0	8 0	" 9 0
1847	20 6	" 25 0	10 0	" 14 0	8 6	" 9 6
1848	20 0	" 24 0	11 8	" 12 0	8 6	" 10 0
1849	not quoted.		not quoted		7 0	" 7 6
1850					7 0	" 0 0
1851	17 6	to 23 0	9 0	to 12 0	6 6	" 8 0
1852	18 6	" 22 0	9 6	" 12 0	4 6	" 7 9
1853	23 0	" 27 0	14 6	" 16 6	8 0	" 11 6
1854	20 0	" 26 0	11 0	" 16 6	8 0	" 10 6
1855	22 6	" 26 6	14 0	" 16 0	10 0	" 11 0
1856	17 0	" 24 0	10 0	" 20 0	7 6	" 10 0
1857	20 0	" 29 0	10 6	" 15 0	9 8	" 11 9
1858	20 0	" 27 6	9 9	" 18 9	8 8	" 10 6
1859	20 0	" 25 0	10 0	" 14 0	8 9	" 11 0
1860	21 0	" 27 8	11 0	" 16 0	10 0	" 13 6
1861	21 0	" 29 0	12 0	" 22 0	6 8	" 14 0
1862	16 9	" 27 0	12 0	" 18 8	6 0	" 12 0
1863	20 0	" 20 0	18 0	" 16 0	8 0	" 11 6
1864	25 0	" 30 0	15 0	" 19 0	10 0	" 13 6
1865	15 6	" 32 6	15 6	" 25 0	10 0	" 17 0
1866	21 6	" 40 0	20 0	" 26 0	13 6	" 22 6
1867	20 0	" 30 6	14 0	" 22 0	7 6	" 13 6
1868	20 0	" 26 9	10 6	" 18 6	7 0	" 18 0
1869	22 0	" 28 0	11 0	" 14 0	6 9	" 9 0
1870	27 0	" 32 6	18 0	" 22 0	8 0	" 14 6
1871	23 0	" 37 0	12 0	" 23 0	11 0	" 16 3
1872	21 6	" 45 0	18 0	" 32 0	12 8	" 18 0
1873	28 0	" 39 0	16 8	" 27 0	7 0	" 16 0
1874	25 0	" 35 0	18 0	" 20 0	7 0	" 14 0
1875	26 6	" 37 6	15 0	" 21 8	9 6	" 17 6
1876	30 0	" 40 0	19 0	" 24 0	13 0	" 20 6
1877	35 0	" 38 9	18 0	" 25 0	13 6	" 23 0
1878	30 0	" 36 0	17 0	" 23 0	12 0	" 22 0
1879	25 0	" 35 9	16 0	" 24 0	10 6	" 20 0
1880	25 0	" 38 0	16 6	" 22 6	10 0	" 17 0
1881	30 0	" 29 0	15 0	" 23 0	10 0	" 15 0
1882	33 0	" 46 0	20 0	" 23 0	12 6	" 18 6
1883	36 0	" 50 6	24 6	" 33 0	14 0	" 21 6
1884	29 0	" 43 6	19 6	" 28 0	12 0	" 19 6
1885	24 0	" 34 0	13 0	" 22 6	10 0	" 15 0
1886	25 0	" 34 0	12 0	" 22 0	10 6	" 16 0
1887	22 0	" 30 0	11 0	" 19 0	8 0	" 13 0
1888	22 0	" 32 0	13 0	" 24 0	10 0	" 15 0
1889	26 0	" 40 0	18 0	" 29 0	13 0	" 22 0

TABLE NO. 2.—BLACKFACE SHEEP—Continued.

Year.	Wethers.				Ewes.				Lambs.						
	s.	d.	to	s.	d.	s.	d.	to	s.	d.	to	s.	d.		
1890	24	0	to	27	0	14	0	to	27	0	10	6	to	19	0
1891	21	0	"	27	0	10	0	"	24	0	7	6	"	15	0
1892	16	0	"	28	6	6	0	"	17	0	3	0	"	10	0
1893	21	0	"	27	0	12	0	"	24	0	7	0	"	14	0
1894	20	0	"	27	0	14	6	"	26	6	8	6	"	16	6
1895	23	0	"	41	0	16	0	"	28	6	9	0	"	17	0
1896	19	0	"	35	4	13	0	"	24	0	6	0	"	13	6
1897	21	0	"	36	6	15	0	"	25	6	7	0	"	14	6
1898	22	0	"	37	0	16	0	"	26	6	8	0	"	15	0
1899	20	0	"	33	6	13	0	"	24	0	5	6	"	13	0
1900	23	0	"	36	0	16	0	"	26	6	8	0	"	15	6
1901	20	0	"	35	0	14	0	"	25	6	6	6	"	14	6
1902	18	6	"	34	0	12	0	"	24	0	6	0	"	14	0
1903	21	0	"	36	0	15	0	"	28	0	7	0	"	16	6
1904	23	0	"	38	6	18	0	"	30	0	8	6	"	17	6
1905	21	6	"	37	0	19	0	"	31	0	9	0	"	18	6
1906	23	0	"	38	0	20	0	"	33	0	10	0	"	19	6
1907	21	0	"	33	6	17	0	"	28	0	8	6	"	17	6
1908	19	6	"	30	0	15	0	"	24	6	8	0	"	16	0
1909	17	0	"	28	0	11	6	"	22	0	6	3	"	13	0
1910	21	0	"	32	6	16	0	"	27	6	8	0	"	17	0
1911	19	0	"	29	6	14	0	"	24	0	7	0	"	15	0
1912	21	6	"	32	6	17	0	"	27	6	9	6	"	17	6
1913	24	6	"	36	0	21	0	"	31	0	12	6	"	21	6
1914	27	0	"	38	6	25	0	"	34	6	15	6	"	24	0
1915	31	0	"	42	6	29	0	"	39	6	17	0	"	25	6
1916	33	0	"	46	6	31	0	"	43	0	19	0	"	27	6
1917	36	0	"	51	0	33	0	"	47	0	21	0	"	30	0
1918	41	0	"	56	0	36	0	"	50	6	27	0	"	33	0
1919	44	0	"	62	0	39	0	"	54	0	29	0	"	36	0
1920	46	0	"	66	0	44	0	"	62	0	31	0	"	42	0
1921	32	9	"	60	9	35	3	"	62	6	20	3	"	47	0
1922	40	3	"	63	0	40	6	"	74	0	18	0	"	44	0
1923	46	0	"	65	6	43	0	"	78	0	21	6	"	45	6
1924	46	0	"	68	6	45	6	"	85	6	25	0	"	55	6
1925	36	0	"	60	0	40	0	"	78	0	17	6	"	44	0

Year.	Wethers.				Ewes.				Lambs.						
	s.	d.	to	s.	d.	s.	d.	to	s.	d.	to	s.	d.		
1926	30	0	to	54	0	31	0	to	70	0	21	9	to	49	0
1927	26	6	"	48	0	26	0	"	64	0	17	9	"	40	0
1928	29	0	"	45	9	24	0	"	57	0	16	6	"	33	6
1929	29	9	"	46	0	29	0	"	64	0	20	9	"	43	0
1930	31	6	"	45	0	28	6	"	60	0	20	0	"	45	9
1931	19	6	"	29	9	15	0	"	38	0	14	3	"	36	9
1932	12	0	"	19	6	15	0	"	29	0	7	3	"	13	6
1933	..	..	..	..	..	20	0	"	34	0	12	9	"	19	3
1934	..	..	..	..	..	22	6	"	44	0	16	0	"	25	3
1935	..	..	..	..	..	26	0	"	40	0	16	0	"	26	9
1936	..	..	..	..	..	27	6	"	48	0	13	6	"	37	6
1937	..	..	..	..	..	32	0	"	54	0	22	6	"	39	3
1938	..	..	..	..	..	32	0	"	50	0	12	6	"	28	0
1939	..	..	..	..	..	17	6	"	40	0	12	6	"	24	6
1940	..	..	..	..	..	22	6	"	50	0	16	0	"	35	3
1941	..	..	..	..	..	27	6	"	52	6	19	0	"	45	0
1942	..	..	..	..	..	28	0	"	51	0	16	9	"	39	6
1943	34	0	to	61	9	32	6	"	63	0	21	9	"	44	0
1944	37	0	"	70	6	30	6	"	66	0	23	6	"	48	0
1945	45	0	"	67	9	30	0	"	69	0	22	3	"	54	9
1946	52	6	"	76	0	34	0	"	71	0	26	6	"	49	6
1947	64	0	"	99	0	44	0	"	84	0	38	0	"	64	0
1948	79	6	"	105	0	52	6	"	95	0	39	0	"	70	0

TABLE NO. 3.—PRICE OF WOOL, PER STONE OF 24 LB., SINCE 1818.

Year.	Laid Cheviot.		White Cheviot.		Laid Highland.		White Highland.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1818	40 0	to 42 2	..	..	20 0	to 22 6	..	..
1819	21 0	" 22 0	..	..	10 0	" 10 8	..	..
1820	20 0	" 22 0	..	..	9 0	" 10 0	..	..
1821	18 0	" 20 0	..	..	9 0	" 10 0	..	..
1822	12 6	" 14 6	..	..	5 0	" 6 6	..	..
1823	9 0	" 10 6	..	..	5 0	" 5 9	..	..
1824	13 6	" 15 0	..	..	6 0	" 6 3	..	..
1825	10 6	" 22 0	..	..	10 0	" 10 6	..	..
1826	11 0	" 14 0	..	..	3 0	" 5 6	..	..
1827	11 0	" 14 0	..	..	5 6	" 6 9	..	..
1828	8 0	" 11 0	..	..	5 6	" 6 0	..	..
1829	8 6	" 11 0	..	..	4 3	" 0 0	..	..
1830	9 6	" 11 0	..	..	4 6	" 5 0	..	..
1831	17 0	" 20 0	..	..	7 6	" 8 6	..	..
1832	14 0	" 16 0	..	..	7 0	" 7 6	..	..
1833	18 0	" 20 7	..	..	10 0	" 11 0	..	..
1834	21 0	" 24 6	..	..	5 6	" 7 0	..	..
1835	19 0	" 20 6	..	..	9 6	" 10 8	..	..
1836	21 0	" 25 0	..	..	10 0	" 14 0	..	..
1837	12 0	" 14 0	..	..	7 0	" 7 8	..	..
1838	19 0	" 22 6	..	..	6 0	" 10 0	..	..
1839	18 0	" 20 0	..	..	8 0	" 12 0	..	..
1840	15 0	" 0 0	..	..	7 0	" 0 0	..	..
1841	15 0	" 16 9	..	..	6 0	" 7 5	..	..
1842	12 6	" 14 0	..	..	not quoted.		..	..
1843	9 0	" 11 6	..	..	5 0 to 6 0		..	..
1844	15 0	" 18 0	..	..	not quoted.		..	..
1845	14 6	" 17 6	..	..	7 6 to 8 6		..	..
1846	12 0	" 14 6	..	..	8 0 " 8 6		..	..
1847	12 6	" 14 0	..	..	not quoted.		..	..
1848	9 6	" 11 0	..	..	4 9 to 0 0		..	..
1849	12 0	" 16 6	..	..	6 0 " 6 3		..	..
1850	15 0	" 17 6	..	..	8 0 " 8 6		..	..
1851	12 0	" 16 0	..	..	8 0 " 9 3		..	..
1852	18 0	" 15 0	..	..	8 0 " 9 0		..	..
1853	19 0	" 22 0	..	..	11 0 " 12 6		..	..
1854	12 0	" 15 0	..	..	7 6 " 8 6		..	..
1855	14 6	" 19 0	..	..	8 6 " 9 0		..	..
1856	19 0	" 21 6	..	..	11 0 " 0 0		..	..
1857	19 0	" 24 0	..	..	18 0 " 14 3		..	..
1858	15 0	" 17 0	..	..	8 9 " 10 0		..	..
1859	18 6	" 24 0	..	..	10 9 " 11 6		..	..
1860	22 0	" 32 0	27 0 to 33 0		10 0 " 11 3		..	..
1861	19 6	" 27 0	from 30s. upwards.		not quoted.		..	..
1862	18 6	" 26 0	30 0 to 37 0		11 6 to 16 0		..	..
1863	25 6	" 31 0	38 0 " 42 0		15 3 " 17 6		..	..
1864	31 0	" 39 0	47 0 " 54 0		17 6 " 20 0		..	..
1865	28 0	" 30 0	44 0 " 45 0		15 0 " 17 0		..	..
1866	24 0	" 30 0	30 0 " 33 0		14 0 " 16 0		..	..
1867	16 0	" 21 6	not quoted.		not quoted.		..	..
1868	19 0	" 26 0	22 0 to 32 0		8 6 to 9 0		..	..
1869	18 0	" 26 6	not quoted.		8 6 " 10 0		..	..
1870	15 0	" 23 6	25 0 to 26 0		9 6 " 0 0		..	..
1871	20 0	" 26 6	29 0 " 34 6		12 0 " 15 0		..	..
1872	26 0	" 37 6	40 0 " 48 0		18 0 " 21 0		..	..
1873	17 0	" 18 0	34 6 " 40 0		9 0 " 12 0		..	..
1874	18 6	" 26 6	30 0 " 34 0		9 6 " 18 0		..	..
1875	25 0	" 32 0	34 6 " 38 0		12 6 " 16 0		..	..
1876	20 0	" 24 0	30 0 " 34 6		9 6 " 12 0		..	..
1877	20 9	" 26 0	28 0 " 30 0		10 0 " 12 0		..	..
1878	18 9	" 25 0	27 0 " 32 0		8 6 " 11 6		..	..
1879	15 0	" 17 0	prices very low.		7 0 " 0 0		..	..
1880	20 0	" 24 0	30 0 to 32 0		10 6 " 11 6		14 0 to 15 0	..
1881	17 0	" 21 0	27 0 " 30 0		5 0 " 9 6		12 0 " 18 0	..
1882	14 0	" 18 0	27 6 " 28 0		7 6 " 9 0		13 0 " 14 0	..
1883	12 0	" 18 0	26 0 " 28 0		6 6 " 8 6		11 6 " 12 6	..
1884	12 0	" 18 0	26 0 " 28 0		6 6 " 8 6		11 6 " 12 6	..
1885	12 0	" 17 0	22 6 " 26 0		6 0 " 8 0		11 6 " 12 0	..
1886	12 0	" 18 0	23 0 " 27 6		6 6 " 8 6		11 6 " 12 0	..
1887	14 0	" 22 0	23 6 " 28 0		7 0 " 9 0		11 6 " 13 0	..
1888	13 0	" 20 0	23 0 " 28 0		7 0 " 9 0		11 0 " 12 6	..

TABLE No. 3.—PRICE OF WOOL—Continued.

Year.	Laid Cheviot.		White Cheviot.		Laid Highland.		White Highland.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1888	18 0	to 18 0	24 0	to 28 0	7 0	to 9 0	11 0	to 12 6
1890	18 0	" 18 0	24 0	" 28 0	7 0	" 9 0	11 0	" 12 6
1891	12 6	" 18 0	22 0	" 28 0	7 0	" 9 0	11 0	" 12 6
1892	12 0	" 18 0	20 0	" 28 0	7 0	" 8 6	10 6	" 12 0
1893	12 0	" 17 0	20 0	" 27 0	7 0	" 8 0	10 0	" 12 0
1894	12 0	" 16 0	20 0	" 26 0	7 0	" 8 0	10 0	" 12 0
1895	12 0	" 16 0	20 0	" 25 0	7 0	" 8 0	10 0	" 11 6
1896	11 0	" 15 0	19 0	" 24 0	7 0	" 8 0	10 0	" 11 6
1897	11 0	" 14 0	18 0	" 23 0	7 0	" 8 0	10 6	" 12 0
1898	10 0	" 13 0	16 0	" 20 0	7 0	" 8 0	10 0	" 11 6
1899	10 0	" 12 0	13 0	" 18 6	7 0	" 8 0	8 6	" 9 6
1900	9 9	" 12 0	13 0	" 18 6	6 9	" 7 9	8 0	" 9 6
1901	9 0	" 10 0	11 0	" 16 6	5 9	" 6 6	8 0	" 9 0
1902	9 0	" 10 0	11 6	" 17 0	6 0	" 6 6	8 6	" 9 6
1903	10 0	" 12 0	15 0	" 18 0	7 0	" 8 0	11 6	" 12 6
1904	15 0	" 17 6	20 0	" 21 0	9 0	" 10 0	14 0	" 15 0
1905	17 0	" 20 0	24 0	" 26 0	10 0	" 11 0	15 0	" 16 0
1906	18 0	" 21 0	27 0	" 28 6	11 6	" 18 0	16 6	" 17 6
1907	*		22 0	" 24 0	11 0	" 12 6	16 0	" 17 0
1908	*		16 0	" 18 0	†		8 0	" 8 6
1909	*		24 0	" 26 0	†		12 6	" 14 0
1910	*		25 0	" 30 0	†		13 0	" 14 6
1911	*		25 0	" 30 0	†		18 0	" 14 6
1912	*		24 0	" 29 0	†		14 0	" 15 0
1913	*		25 0	" 30 0	†		17 0	" 18 0
1914	*		24 0	" 29 0	†		15 0	" 15 6
1915†	*		42 0	" 46 0	†		21 0	" 22 0

* No Cheviots smeared now.

† No Highlands smeared now.

‡ These are July prices.

PRICE OF WOOL PER STONE OF 24 'LB.—Continued.

		CHEVIOT.				HALF-BRED.				BLACK-FACE.		CROSS-BRED (BLACKFACE EWE AND LEICESTER RAM).			
		Hogg.		EWE AND WETHER.		Hogg.		EWE AND WETHER.		Hogg.	EWE AND WETHER.	Hogg.		EWE AND WETHER.	
		Washed.	Un- washed.	Washed.	Un- washed.	Washed.	Un- washed.	Washed.	Un- washed.			Washed.	Un- washed.	Washed.	Un- washed.
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
1 1916	CAITHNESS & SUTH- ERLAND	36 6	30 0	33 0	27 6	34 6	28 6	33 0	27 6	23 0	23 0	23 6	25 6	23 6	25 6
		40 0	32 6	34 0	29 0	35 0	29 0	34 0	28 6						
1 1917	CAITHNESS & SUTH- ERLAND	40 6	33 0	37 0	31 0	38 6	31 6	37 0	31 0	25 6	25 6	31 0	28 6	31 6	28 6
		44 6	36 0	37 6	32 6	39 0	32 6	37 6	31 6						
1 1918	CAITHNESS & SUTH- ERLAND	48 6	35 6	39 6	33 0	41 0	33 6	39 6	33 0	27 0	27 0	33 6	30 6	33 6	30 6
		47 6	33 6	40 0	34 6	41 6	34 6	40 0	33 6						
1919	CAITHNESS & SUTH- ERLAND	34 0	70 0	32 0	66 0	32 0	62 0	70 0	58 6	34 0	34 0	46 0	39 0	44 0	38 0
		38 0	74 0	34 0	68 0	34 0	63 0	72 0	60 0						
1920	CAITHNESS & SUTH- ERLAND	36 0	70 0	33 0	66 0	74 0	54 0	65 0	50 0	24 0	24 0	35 0	29 0	34 0	27 0
		90 0	74 0	37 0	68 0	76 0	56 0	68 0	52 0						
1921	CAITHNESS & SUTH- ERLAND	22 0	17 0	19 0	15 0	18 6	14 6	16 0	13 0	9 6	9 6	12 0	10 0	12 0	10 0
		23 0	18 0	20 0	16 0	19 6	15 6	17 0	14 6						
1922	CAITHNESS & SUTH- ERLAND	30 0	25 0	26 0	22 0	26 0	20 0	22 0	18 0	16 0	16 0	16 6	15 0	16 6	15 0
		31 6	26 0	27 0	23 0	27 0	21 0	23 0	19 0						
1923	CAITHNESS & SUTH- ERLAND	41 0	34 0	36 0	30 0	33 0	27 0	30 0	25 0	17 6	17 6	20 0	18 0	20 0	18 0
		43 0	35 0	37 0	31 0	34 0	28 0	31 0	26 0						
1924	CAITHNESS & SUTH- ERLAND	53 0	49 0	53 0	45 0	49 0	40 0	45 0	39 0	25 6	25 6	34 6	30 6	33 0	30 0
		60 0	50 0	54 0	46 9	50 0	41 0	46 0	40 0						
1925	CAITHNESS & SUTH- ERLAND	39 0	34 0	36 0	30 0	33 6	28 6	32 0	27 0	25 6	25 6	26 0	23 6	25 6	23 0
		40 0	35 0	37 0	31 0	34 0	29 0	33 0	28 0						
1926	Do.	35 0	29 0	32 0	26 0	32 0	26 6	28 0	24 6	19 0	19 0	22 6	20 0	22 0	19 6
		36 0	30 0	33 0	29 0	33 0	27 6	29 0	25 6						
1927	Do.	38 0	31 0	35 0	31 0	34 6	29 6	32 0	27 6	24 0	24 0	27 0	25 6	27 0	25 0
		39 0	32 0	36 0	32 0	35 6	30 0	33 0	28 6						
1928	Do.	51 0	43 9	48 0	41 0	47 9	40 0	43 9	37 0	24 6	24 6	33 0	31 0	32 0	30 0
		52 0	44 9	49 0	42 0	48 9	41 6	44 9	38 9						
1929		37 9	32 0	34 6	29 0	34 0	29 0	32 6	27 0	24 0	24 0	27 0	25 0	26 0	24 0
1930		23 6	19 0	22 0	18 0	21 0	17 6	20 0	16 6	12 0	12 0	17 6	15 6	16 6	15 6
1931		16 6	13 6	15 6	13 9	15 0	13 0	13 6	11 6	11 0	11 0	12 0	10 6	11 6	10 0
1932		14 6	11 6	14 0	11 6	12 6	11 6	11 6	9 6	8 0	8 0	9 0	8 0	8 0	7 6
1933		20 9	17 0	19 0	16 9	18 0	16 6	17 0	14 6	11 6	11 6	12 0	11 0	11 6	11 0
1934		21 6	17 6	21 0	17 6	19 9	17 0	17 0	14 0	10 9	10 9	12 0	11 0	12 0	11 0
1935		26 0	21 9	24 6	19 6	21 6	19 0	19 0	17 0	10 6	10 6	14 0	12 6	14 0	12 6
1936		27 0	22 0	25 6	20 9	21 6	19 0	19 0	17 0	14 9	14 0	17 0	15 0	17 0	16 0
1937		39 0	35 0	38 9	33 6	34 6	32 0	34 6	31 6	26 9	26 0	32 0	29 0	32 0	29 0
1938		22 0	19 6	21 6	18 6	21 0	18 6	20 0	18 6	12 0	12 0	16 0	14 6	16 0	14 6
1939		26 0	22 0	25 6	21 6	24 0	21 6	23 6	21 6	15 0	15 0	21 0	19 0	21 0	19 0
1 1940		37 0	30 6	37 0	30 6	33 0	29 6	33 0	29 6	25 0	25 0	28 6	26 0	28 6	26 0
1 1941		42 0	35 6	42 0	35 6	37 6	34 0	37 6	34 0	29 0	29 0	33 0	30 0	33 0	30 0
1 1942		47 0	40 0	47 0	40 0	42 0	38 6	42 0	38 6	33 0	33 0	37 0	34 0	37 0	34 0
1 1943		47 0	40 0	47 0	40 0	42 0	38 6	42 0	38 6	33 0	33 0	37 0	34 0	37 0	34 0
1 1944		47 0	40 0	47 0	40 0	42 0	38 6	42 0	38 6	33 0	33 0	37 0	34 0	37 0	34 0
1 1945		47 0	40 0	47 0	40 0	42 0	38 6	42 0	38 6	33 0	33 0	37 0	34 0	37 0	34 0
1 1946		47 0	40 0	47 0	40 0	42 0	38 6	42 0	38 6	33 0	33 0	37 0	34 0	37 0	34 0
1 1947		47 0	40 0	47 0	40 0	42 0	38 6	42 0	38 6	33 0	33 0	37 0	34 0	37 0	34 0
1 1948		69 6	58 6	69 6	58 6	56 0	51 0	56 0	51 0	51 0	51 0	50 6	46 0	50 6	46 0

¹ The prices given were prices fixed by Government, and not free market prices.

GENERAL SHOW AT INVERNESS, 1948.

AFTER a lapse of eight years the Society's Show was held at Inverness on Tuesday, 22nd June 1948, and three following days. This was the One hundred and ninth Show of the series, and the thirteenth General Show to be held at Inverness.

The Show will remain an outstanding event in the history of the Society by reason of the visit of Their Majesties The King and Queen and H.R.H. Princess Margaret. It was the first occasion on which a reigning Sovereign visited a Highland Show, and His Majesty marked the occasion by conferring on the Society the privilege of using the title "Royal," the Society to be known in future as "The Royal Highland and Agricultural Society of Scotland." This honour was highly appreciated by the Directors and members as indicating the great interest taken by His Majesty in the work of the Society and in the industry which it represents.

The site provided by the Town Council of Inverness at The Bughts Park was an excellent one, which permitted of a compact and convenient layout of the Showyard buildings. As a setting for the Show no site could be more picturesque. In addition to the site the Town Council of Inverness granted a free supply of water and free Police supervision within the Showyard. The Town officials co-operated enthusiastically with the Society's staff in furthering the success of the Show.

The weather, unfortunately, was unsettled, both prior to and during the Show, although it was only on the afternoon of the first day and the night following that heavy rain was experienced. This caused considerable cutting up of the Showground on the Wednesday, but, fortunately, conditions had much improved by Thursday, the day of the Royal visit.

The attendance figures on each day were remarkable, and reflected the keen interest taken by the people of Scotland in the resumption of the Show and the presence of Their Majesties in the Capital of the Highlands. The total attendance figures for the four days were 87,076, compared with 38,619 at the previous Inverness Show in 1932.

There was a good display of Livestock, the entries in the Sheep section being most notable. Implements and Machinery were shown on an impressive scale, and made an excellent display, which provided much interest and instruction.

The Directors are gratified to report that the Accounts show a credit balance of £10,225. Inverness, at which previous Shows almost invariably showed a loss, has, on this occasion, established a record profit.

STATISTICS.

The following is an abstract of entries in the various sections :—

1. CATTLE.

Classes.	No. of Entries.
1-9. Shorthorn	64
10-18. Aberdeen-Angus	67
19-24. Galloway	36
25-27. Belted Galloway	10
28-33. Highland	47
34-42. Ayrshire	76
43-51. British Friesian	54
52-55. Jersey	12
56-57. Hill Cattle (Pens)	7
	<hr/> 373

2. HORSES.

58-60. Clydesdale Stallions and Colts	28
61-63. Clydesdale Geldings	19
64-68. Clydesdale Mares and Fillies	38
	<hr/> 85
69-75. Hunters	38
76-78. Riding Ponies	16
79. Hill Ponies in Saddle	17
80-84. Highland and Western Island Ponies	42
85-89. Shetland Ponies	24
	<hr/> 222

3. SHEEP.

90-96. Blackface	110
97-100. Cheviot	23
101-106. North Country Cheviot	69
107-112. Border Leicester	79
113-115. Half-Bred	16
116-119. Oxford Down	44
120-123. Suffolk	64
	<hr/> 405

4. GOATS.

124-128.	28
129. (Milking Competition)	8 ..

5. PIGS.

130-135. Large White	52
136-139. Large Black	19
	<hr/> 71

6. POULTRY.

1-104.	451
----------------	-----

Carry forward . 1550

Classes.

No. of Entries.

Brought forward . 1550

7. DAIRY PRODUCE.

1-4. 29

8. HONEY, &c.

1-21. 132

9. RURAL INDUSTRIES.

1-31. 439

10. LIVE STOCK JUDGING.

Teams of 3 competitors 42

2192

SUMMARY OF ENTRIES.

1. Cattle	373
2. Horses	222
3. Sheep	405
4. Goats	28
5. Pigs	71
6. Poultry	451
7. Dairy Produce	29
8. Honey, &c.	132
9. Rural Industries	439
10. Live Stock Judging (Teams of 3)	42
	<u>2192</u>

The following table gives a comparative view of the entry of cattle, horses, sheep, goats, pigs, poultry, eggs, rabbits, honey, dairy produce, wool, rural industries, &c., and implements, of the value of the premiums offered, and of the receipts at the entrance-gates, grand stands, and for catalogues at the Shows which have been held at Inverness:—

Year.	Cattle.	Horses.	Sheep.	Goats.	Pigs.	Poultry.	Eggs.	Rabbits.	Honey, &c.	Dairy Produce.	Wool.	Rural Industries.	Horse-Shoeing.	Live Stock Judging.	Butter-making.	Implements.	Premiums.	Drawings at Show.
1881	198	77	36	..	..	..	..	..	..	..	..	..	..	..	..	4	£318	£71
1889	302	98	128	..	..	..	..	..	..	..	..	..	..	..	..	24	744	211
1846	428	112	125	..	..	37	..	..	..	23	..	..	..	..	..	59	1050	254
1856	248	131	204	..	..	52	..	..	..	..	..	..	..	..	..	231	1000	315
1865	361	132	317	..	..	98	..	..	..	..	..	..	..	..	..	707	1300	920
1874	391	175	192	..	..	328	..	..	..	..	..	..	..	..	..	1161	2020	1,120
1883	354	172	175	..	..	303	..	..	..	..	..	..	..	..	..	1280	1978	1,295
1892	255	218	201	..	..	229	..	..	..	29	..	..	..	..	..	1381	2056	1,750
1901	360	257	204	..	..	499	..	..	..	42	22	..	..	..	..	1463	2806	2,476
1911	308	275	237	..	..	474	..	..	..	41	..	..	..	..	..	1513	2870	2,550
1923	452	204	272	24	164	546	..	..	88	47	80	337	86	..	..	1777	5485	6,287
1932	359	192	397	23	48	452	55	58	103	32	61	401	88	93	57	1926	6845	6,153
1948	373	222	405	28	71	451	..	..	132	29	..	439	..	126	..	..	9439	34,071

A COMPARISON.

The following figures relating to some of the previous Shows the Society has held will be perused with interest :—

	Cattle.	Horses.	Sheep.	Goats.	Pigs.	Poultry.	Rabbits.	Total Live Stock.	Premiums.	Paid Admissions.	Profit.
Glasgow, 1867 .	286	212	257	..	58	150	..	963	£1600	No Records available.	£1,307
Edinburgh, 1869	310	212	340	..	22	289	..	1123	1600		2,067
Glasgow, 1875 .	411	406	296	..	40	479	..	1639	2665		3,316
Edinburgh, 1877	339	342	305	..	30	234	..	1250	2714		3,710
Edinburgh, 1884	580	453	493	..	35	253	..	1814	4343		1,555
Edinburgh, 1893	380	349	294	..	31	360	..	1414	2600		2,323
Aberdeen, 1894 .	314	324	184	..	34	365	..	1221	2440		1,678
Perth, 1896 .	292	258	204	..	20	374	..	1148	2205		2,511
Glasgow, 1897 .	317	350	245	..	30	275	..	1217	2897		2,021
Edinburgh, 1899	386	518	477	..	46	551	..	1978	3844		3,811
Stirling, 1900 .	321	288	369	..	28	457	..	1463	2915		1,078
Inverness, 1901 .	360	257	204	..	22	499	..	1340	2806		99
Aberdeen, 1902 .	330	253	243	..	42	475	..	1343	2796		1,604
Perth, 1904 .	348	315	238	..	35	413	..	1394	3053		1,828
Glasgow, 1905 .	310	462	234	..	60	534	..	1750	3702		1,208
Peebles, 1906 .	253	253	291	..	40	438	..	1280	3072		416
Edinburgh, 1907	363	464	352	..	58	605	..	1842	3614		2,309
Aberdeen, 1908 .	331	299	237	..	42	509	..	1418	3045		1,881
Stirling, 1909 .	330	355	249	..	54	539	..	1527	3017		1,100
Dumfries, 1910 .	270	355	295	..	54	481	..	1455	3057		562
Paisley, 1913 .	408	472	334	..	48	536	..	1798	5109		2,527
Edinburgh, 1919	215	301	221	60	43	398	..	1238	4517		3,275
Aberdeen, 1920 .	340	250	279	19	112	597	..	1587	4808		74,185
Stirling, 1921 .	367	279	299	59	188	582	..	1774	5055		52,120
Dumfries, 1922 .	422	272	339	41	229	588	..	1891	5488		53,357
Perth, 1924 .	406	283	366	21	202	760	..	2035	5712		58,053
Glasgow, 1925 .	461	340	349	31	178	577	178	2114	6136		71,536
Kelso, 1926 .	430	284	597	31	159	546	108	2155	6004		49,431
Edinburgh, 1927	462	357	493	63	201	724	184	2484	6049		68,553
Aberdeen, 1928 .	421	277	349	25	80	578	120	1850	6131		75,501
Edinburgh, 1931	635	389	684	47	117	644	125	2641	9608		76,310
Dundee, 1933 .	443	256	396	22	75	491	89	1772	6979		96,340
Glasgow, 1934 .	507	287	356	27	155	532	85	1949	7034		99,113
Aberdeen, 1935 .	464	230	386	20	230	500	..	1830	6940		77,550
Alloa, 1937 .	412	290	396	25	135	551	..	1809	6667		79,113
Dumfries, 1938 .	402	300	263	31	150	536	..	1682	6779		66,332
Edinburgh, 1939	454	295	380	38	137	529	..	1833	7039		56,043
Inverness, 1948 .	373	222	405	28	71	451	..	1550	9439		97,272
											10,225

CATTLE.

Everything considered, the entries for Cattle, totalling 373, were satisfactory for this northern centre. They showed an increase over the numbers at the previous Show in Inverness in 1932.

Shorthorns numbered 64—an increase of 7 compared with the last pre-war display in Edinburgh in 1939. The general quality was commendably level. Mr W. L. Anderson, Morphie, Montrose, secured the President's Champion Medal for the best animal of the breed with his lovely roan home-bred six-year-old cow "Morphie Princess Royal," 244,901 (Fig. 11). This was her first Showyard appearance. She was sired by "Ballechin Clipper Chief," 290,092, and was out of "Balthayock Princess Royal 35th," 218,923, by "Cluny Brave Command," 289,474. This champion cow also won the Fife and Kinross Gold Cup, the Duthie Perpetual Challenge Cup, and the Shorthorn Society's £20 for the best female. With their Glastullich-bred two-year-old red Clara heifer "Glastullich

Claretta" (Vol. 93), John & D. P. MacGillivray of Calrossie, Nigg, Ross-shire, were placed reserve to the breed over-all winner. Sired by "Glastullich Fortress," 321,245, she is out of "Glastullich Clare," 275,203, by "Harviestoun Golden Glory," 303,204. This heifer was admired for her shape and breed character. Mr James Cameron, Balnakyle, Munlochy, Ross-shire, was awarded the £20 prize given by the Shorthorn Society for the best bull of the breed with his roan five-year-old "Bapton Uprise," 329,350, bred by Mr J. V. Rank of Delaware, Edenbridge, Kent. This sire was after "Bapton Air Pilot," 298,495, and out of the cow "Bapton Actress 7th," 232,356, by "Cluny Edgar Command," 289,484. The Cup presented by Mr W. Mc'Nair Snadden, M.P., for the best group of three animals—one bull and two females—went to Mr James Durno of Uppermill, Tarves, with his yearling red bull "Saltoun Red Ensign" (Vol. 94), dark-roan four-year-old cow "Princess Martha," 271,458, and the red yearling heifer "Princess Minerva" (Vol. 93). The Eduardo Bullrich Cup for the best pair—a male and a female—bred by Exhibitor, fell to Mrs B. H. Linzee-Gordon of Cluny Castle, Aberdeenshire, with the yearling bull "Cluny Bright Star" (Vol. 94) and the two-year-old cow (in milk) "Cluny Beauty 33rd," 285,549.

Aberdeen-Angus had 67 entries. The best, as in the sister breed of Shorthorns, was in the female classes. The highest honour of the breed was won by MacRobert Farms (Douneside), Ltd., Tarland, Aberdeenshire, with the smooth, beautifully-shaped six-year-old cow "Euthalla 2nd of Douneside," 131,342 (Fig. 12). This cow was got by "Romisider of Dalmeny," 111,878, bred by the Earl of Rosebery, and is out of the dam "Euthalla 126th," 116,138, by "Eugenexor," 91,152. The Douneside champion got the Aberdeen-Angus Society's Champion Medal and the Harviestoun Cup for the best cow, and the Cup gifted by the late Mr F. L. Wallace of Candacraig, Aberdeenshire, for the best female. J. Sainsbury, Ltd., Kinermony, Aberlour, Banffshire, were placed reserve to the supreme winner with their two-year-old bull "Pinnocchio of Gaidrew," 125,789. Bred by Mr W. Donald, Gaidrew, Drymen, this sire was got by "Keystone of Dunira," 107,128, and is out of the cow "Primrose of Gaidrew," 125,297, which is a daughter of "Ethiope of Lethen," 94,808. The Ballindalloch Challenge Cup for the best bull of any age and the Estanguet Silver Cup for the best young bull went to the reserve overhead champion from Kinermony. MacRobert Farms also obtained the Silver Cup given by Mr Kerr of Harviestoun for the best group consisting of one bull and two females, the individual animals being the champion cow, the third prize yearling heifer "Euthalla 3rd of Douneside," 144,181—a daughter of the champion—and the third prize yearling bull "Europie of Douneside," 129,197.

Galloways were only slightly more than half the number of the Aberdeen-Angus, but the quality was excellent and there was a great interest in the display, though they were far removed from the breed's own area. Here, too, a female was judged the best representative of the breed. This was the two-year-old heifer

"Troquhain of Nether Rusko," 45,040 (Fig. 13), belonging to Mr J. L. Dalrymple, Balcombe, Sussex, and who also farms in the Dalbeattie area. She was bred by Mr A. Fergusson, Nether Rusko, Gatehouse-of-Fleet, was got by "Fairfax of Kirkland," 19,053, and is out of the dam "Troquhain of Glaisters," 41,007, by "Popples 5th of Falbae," 19,557. The champion also won the Dr Gillespie Memorial Challenge Trophy for the best breeding animal. The Galloway Cattle Society's Cup for the best animal of the opposite sex went to Mr T. M'Turk, Gateside, Lochfoot, Dumfries, with his five-year-old bull "Thorniehill Marksman," 23,014, bred by Miss S. Gilchrist, Thorniehill, Balmaclellan, Castle-Douglas. He is a son of "Falbae Popples 8th," 20,985, and is out of "Briar of Thorniehill," 35,110, by "Barmark Independence 2nd," 16,149. With one exception all the entries were from attested herds.

Only 10 Belted Galloway were entered and they had as supreme breed winner the five-year-old home-bred bull "Cloburn Smuts," 1451 B (Fig. 14), shown by Mr D. R. Clarkson, Thankerton, Biggar. Sired by "Mark Harry," 1281 B, he is out of "Kirkton Alice 15th," 3886 B, by "Kirkton Atlas 5th," 1203 B. The champion also annexed the Knockbrenx Challenge Cup as the best Belted Galloway. The Ian Hamilton Silver Cup for the best animal of the opposite sex to "Cloburn Smuts" was the two-year-old heifer "Roberton Argent," 7400 B, belonging to Mr J. D. Brown, Robertson, Kirkcudbright.

The rally of Highland Cattle whose entries were 47 made quite a nice quality display. Mr William Walker of Foreland, Islay, had the distinction of winning the supreme awards for both sexes. The President's Champion Medal winner was Mr Walker's red yearling bull "Uallach of Achnacloich," 4475 (Fig. 15), bred by Mr T. E. Nelson, Achnacloich, Connel, Argyll. This was the bull for which 800 guineas was paid at Oban in the spring. He was got by "Calum Seoladair of Smaull," 4245, and was out of the cow "Baravalla II. of Achnacloich," 11,275. Mr Walker's female champion was the three-year-old fold-bred yellow heifer "Blarag of Foreland," 12,052. Got by "Rob Ruadh of Fanans," 4074, she is out of "Una of Foreland," 11,207.

The Ayrshires led in the various cattle breeds with an entry of 76, but it was disappointing that a large percentage of the animals entered did not come before the judges. Quality was rather mixed. The supreme and female champion, shown by Mr Dudley Beck, Darland Hall, near Wrexham, who made his debut at a Highland Show, made a strong impression. She was the six-year-old cow "Balig Queen," 47,623 (Fig. 16), bred by Mr Thomas Black, Balig, Doonfoot, Ayr. Her sire was "Lessnessock Limousine," 45,239, and dam "Harleyholm Dairy Queen 17th," 2616. In addition to the President's Champion Medal, "Balig Queen" secured two other Cups and the Special Prize of £10. Placed reserve was the five-year-old cow "Dunrod Daisy White 16th," 81,423, one week calved, belonging to J. Clark & Sons, Dunrod, Inverkip. She was sired by "Mackay's Achievement," 51,062, and is out of the dam "Dunrod Daisy White 8th," 65,041. The Trent Perpetual

Trophy for the best group of females bred by Exhibitor went to A. W. Montgomerie & Sons, Ltd., Dunduff, Dunure, Ayr, with the three-year-old cow "Westburn Rosebud 3rd," 22,016, and the five-year-old heifers "Lessnessock Dewdrop 2nd," 21,983, and "Lessnessock Bright Smile 5th," 21,970.

British Friesians were represented by 54 entries. Here the top honour of the breed was awarded to Mr James Kilpatrick, Craigie Mains, Kilmarnock, with his handsome three-year-old cow "Craigiemains Victoria 29th," 377,568 R.M.P. (Fig. 17). She is a daughter of "Craigiemains Prince Albert," 57,311 R.M.P., R.M., and is out of "Craigiemains Victoria 5th," 237,146 R.M., by "Dennistoun Yeringa," 43,881. The champion got the President's Medal, the J. P. Brown Perpetual Cup, and the British Friesian Society's Medal or Spoon, the latter as the best female. Mr Kilpatrick's strongest competitor for the breed championship was the three-year-old bull "Parkhouse Hiltkeesjo," 97,981 P.I., R.M.P., from Mr J. M. Whiteford, Southbar, Inchinnan, Renfrewshire. Bred by T. D. Allan & Sons, Parkhouse, Biggar, he was sired by "Royal Keejo," 59,113 P.I., R.M.P., R.M., and is out of the cow "Parkhouse Erakke 2nd," 290,142 P.I., R.M. He won the British Friesian Society's Medal given for the best male. For the best group of three the British Friesian Society's Cup was won by T. D. Allan & Sons, Parkhouse, Biggar, with their five-year-old and four-year-old cows (in milk) "Parkhouse Black Bella 4th," 333,392 R.M., and "Parkhouse Queen Maisie 3rd," 360,474 R.M., respectively, and the yearling bull "Parkhouse Bram," 126,151 P.I.

Jersey breed entries numbered 12. Both the champion and reserve winner were shown by Inverness-shire exhibitors. The breed leader was the three-year-old bull "Snailwell Aristocrat 4th," 24,750 (Fig. 18), belonging to Mr W. U. Goodbody, Invergarry. He was bred by Mr H. L. Webb, Snailwell, Newmarket, and was got by "Normandy Spitfire," 21,923. The runner-up and best female was the reserve three-year-old cow, in milk, "Dochfour Una," 63,319, bred by and the property of Baroness Burton of Dochfour, Inverness. This cow was sired by "Somborne Blue Rinse," 22,947. The Special Prize for the best Scottish-bred cow which had yielded not less than 8000 lb. of milk at 4.5 per cent butter-fat in a lactation not exceeding 365 days was won by Sir Robert I. A. Forbes-Leith, Fyvie Castle, Aberdeenshire, with the five-year-old cow "Fyvie Tunisia," 55,355.

For the first time there was a section for the encouragement of hill cattle of the Highland and Galloway breeds, and also crosses of the beef breeds. A condition was that the entries—there were only seven pens from three exhibitors—should be from farms drawing or eligible to draw the 1947-48 Hill Cattle Subsidy. Mr George Mundell, Ladystone, Bunchrew, won the Lord Lovat Special Prize of £10 with a Galloway \times Shorthorn cow.

HORSES.

Though the display of Clydesdales was representative the strength in numbers was less than that to which one is accustomed at other Show centres of the Society. Among the Clydesdale stallions and colts the overhead champion was the four-year-old stallion "Gartness Utility," 24,280 (Fig. 19), shown by G. & J. Campbell, Gartness, Balfroun. He was bred by Messrs John More & Sons, The Beild, Gargunnoch, is by "Ambassador," 23,284, and out of the mare "Beild Tibby," 63,511, by "Beneficent," 21,572. In addition to the President's Medal he secured the Paisley Perpetual Cup and the James Kilpatrick Perpetual Cup for the best stallion or colt. T. Clark & Son, Muirtons, Perth, received the reserve honour with the four-year-old colt "Regal Monarch," 24,474, bred by Messrs M'Quistin, Balneil, Stranraer, and got by "Muirton Monarch," 23,787.

In the classes for geldings there was only one exhibitor in the Inverness division of the Show. Mr W. B. Bryce, Cambusdrennie, Stirling, with a weighty four-year-old roan named "Clyde" (Fig. 20), was selected for the championship. He is the progeny of "Duntroon Castle," 22,911, and was bred by Mr W. Nisbet, Garwhilling, Kilmarnock. This horse also won the James Clark Cup. The runner-up was Mr Gavin Hendrie, Tower, Sanquhar, with his three-year-old "Caledonia"—a son of "Cumberland Imperial," 23,862—bred by Mr Wilson Ramsey, Whitfield, Wigtownshire.

Females made up the largest section of the Clydesdales. The President's Champion Medal was won by Mr A. Sommerville, Wester Cowden, Dalkeith, with his two-year-old filly "Cowden Primula" (Fig. 21), bred by Mr J. M. Mitchell, Strath Farm, Campbeltown, and got by "Sandyknowe Ideal," 22,948. Her dam was "Strath Sallie," 64,348, and was sired by "Craigie Beau Ideal," 21,856. This filly also carried away the Clydesdale Horse Society's Cawdor Cup as the best female. Messrs J. W. Young & Son, West Doura, Kilwinning, Ayrshire, was reserve to the champion with their aged yeld mare "Doura Bonnie Jean," 71,472, bred by Mr Stewart Wilson, Broxburnhall, West Lothian.

Hunters (38 entries) made a capital display. Here, Mr J. L. Dalrymple, The White House, Balcombe, Sussex, was supreme of the breed with a gelding named "Darrington" (Fig. 22), winning the President's Champion Medal and the Dumfries Centenary Silver Cup. Placed reserve was the gelding "Dennis," shown by Mrs Cox, Strowan, Crieff. The Manderston Cup for the best breeding Hunter was awarded to Miss E. Thomson Currie, Clatto, Cupar, Fife, with the home-bred seventeen-year-old mare "Merry Ann," 7938, after "Ardavon," and out of "Meg Merrilies," 6032.

There was a remarkably good display of Highland and Western Island Ponies. They attracted a great deal of interest. The breed champion was the dun ten-year-old stallion "Glenalmond," 2359 (Fig. 23), bred and shown by the Department of Agriculture. He is by "Fender Laddie," 977, out of the mare "Sheena of Knocknagael," 6690, by "Macpherson," 735. This stallion, in addition to the Champion Medal, won the Kinmonth Gold Quaich, the Dundee

Citizen's Silver Cup, and the Highland Pony Society's Special Prize for the best male not exceeding 14·2 hands. Mrs J. A. Cameron, Glenfinlas, Callander, with her nine-year-old mare "Ledi Betty," 7158, was placed reserve. She was bred by Mr R. Macleod, Frobost, South Uist, and was sired by "Faillie Comet," 1770. This mare got the Special Prize of the Highland Section of the National Pony Stud Book for the best female not exceeding 14·2 hands.

Mr J. E. Kerr of Harviestoun, Dollar, had a series of notable victories for Shetland Ponies. He won the breed championship, the reserve honour and the group trophy, as well as led in every class in which he was an exhibitor. His outstanding exhibit was his black four-year-old stud-bred "Harviestoun Beachdair" (Fig. 24), by "Balgair," 1403, out of "Harviestoun Pixie," 4727, by "Dunsmuir," 1155. With the President's Medal he got the Shetland Pony Society's Cup for the best trio—one male and two females—these being his champion, his reserve champion—the twelve-year-old black mare "Harviestoun Beta"—and the three-year-old black filly "Harviestoun Beda."

There were classes for Riding Ponies and for Hill Ponies. The Cup for the best Hill Pony of riding type went to the eight-year-old light-grey gelding "Sgianach Glas," shown by Lieutenant-Colonel D. W. A. D. Mackenzie, C.V.O., D.S.O., of Farr, Inverness, and bred by Miss Mackenzie, Glenkyllachy, Tomatin, Inverness-shire.

The Jumping Competitions were watched with the keenest enthusiasm. The North of Scotland Championship Cup was won by Mrs A. J. Snodgrass, Kippilaw, Dalkeith, with her mare "Swallow." Mrs Snodgrass led in three of the four classes and stood second in the class in which she failed to get the leading prize.

SHEEP, GOATS, PIGS, &C.

Sheep were more numerous than at the Inverness 1932 Show. Blackfaces totalled 110 out of the total of 405 of all breeds. Mr A. L. P. F. Wallace of Candacraig, Strathdon, topped the breed and secured all the trophies with his outstanding three-shear tup, bred by Mr Dunlop, Parishholm, Douglas, got by "Parkhall Whisky." The runner-up was Mr J. Macfarlane, Hartwoodmyres, Selkirk, with his Weston-bred ram that stood next in his class to the champion. The Cheviot Sheep champion was the three-shear tup from the flock of Mr G. Hedley, Nether Horsburgh, Innerleithen, bred by Hall & Son, Wooler.

In a grand turn-out of North Country Cheviot sheep, Mr William MacGillivray, Glastullich, Nigg, Ross-shire, took the championship with his Calrossie-bred two-shear tup "Mighty Fine." Messrs John & D. P. MacGillivray of Calrossie, Nigg, the breeders of the champion, were reserve with a home-bred four-shear ewe. Border Leicesters came next to the Blackfaces in the number of entries. Mr T. Black, Balig, Ayr, won the championship trophies with his three-shear "King o' Carrick," 14,084, bred by Mr James Findlay, Bogardo, Forfar. He was sired by "Dalama," 13,102. Mansfield Estates, Scone Palace, Perth, were reserve with a shearling tup by "Knockdon Eureka," 13,480. The champion Half-Bred sheep, a three-

shear ewe, came from Mr W. Sandilands, Charterhouse, Kelso, the reserve honour going to Messrs W. H. & R. Barr, Upper Dalhousie, Midlothian, with a three-shear Dalmeny-bred ewe. No entry was made from the North and North-east in the sections for Oxford Downs and Suffolks. Mr W. F. Osborne, Hatton, Leven, triumphed for Oxford Downs with a home-bred tup lamb by "Hatton Law," 13,941; Mr M. Templeton, Charterhouse, Kelso, being reserve with a shearling ewe by "Charter," 13,898. Mr A. R. Turnbull, East Camno, Meigle, won the Suffolk Championship with his two-shear ram "Benacre Umpire," bred by Colonel Sir R. E. S. Gooch, Bt., D.S.O., Wrentham, Suffolk. Next in order of merit was a shearling ewe from Mr R. Barr, Upper Dalhousie, Bonnyrigg. The Cup for the group of four went to Mr W. Rintoul, Pratis, Leven.

28 entries were in the Goat Section. Mrs M'Lagan, Mannerston, Blackness, Linlithgow, got the highest honour for her white five-year-old male "Tirley Palm," BS 3140, his breeder being Miss Edwards, Wooden Walls, Brisco, Carlisle, and placed reserve was a black-and-white three-year-old female "Nowell Marigold," 17,058, from Mrs J. Scott, Fossoway, Kinross-shire.

Large White and Large Black were the only Pig Sections. The Large White predominated and the champion, from Mr G. C. Taylor, Moncur, Inchture, Perthshire, was a two-year-old sow "Moncur Champion Lady 17th" (Vol. 64). She was by "Moncur Kingmaker," 121,249. Mr T. Lawson, Carriston, Markinch, Fife, was reserve with a yearling sow which stood second to the champion in her class. A yearling boar from Mr D. I. Low-Mitchell, Clochtow, Forfar, was the champion in the Large Black classes. His name is "Thelveton Malcolm 1st," BA 59, and was bred by Sir John Mann, Bt., Diss, Norfolk. The reserve honour was given to a three-year-old sow from Mr J. Reid, Willowbrae, Monifieth, Angus.

The President's Champion Medal winners in the Sheep, Goats and Pigs sections are illustrated in Figs. 25 to 34.

The Poultry Section was excellent in numbers and quality, a feature being the large display of Turkeys. The Championship Silver Salver in the Poultry Division went to W. Binnie & Son, Wester Garth, Denny, with a white Leghorn cock. This trophy had been won outright by W. Binnie & Son, but they re-presented it to the Society on a permanent basis, and this was the first time since then that they have secured it. Mrs Andrew, South Tulloford, Old Meldrum, got the Silver Medal for the best Turkey—a cock.

The team of young farmers that won the 'Glasgow Herald' Challenge Cup in the Live Stock Judging Competition was Perthshire, with 1098 points.

Dairy Produce, Honey, and Rural Industries (Open and Confined) were great sources of interest to the magnificent daily attendance of visitors. The Cup for the most points in Honey was awarded to Mr G. Anderson, Home Farm, Mayne, Elgin.

For New Implements Silver Medals went to J. A. Cuthbertson, Ltd., Biggar; International Harvester Co. of Great Britain, Ltd.; John Oswald & Son, Brechin; and A. M. Russell, Ltd., Balgreen Road, Edinburgh.



Fig. 11. —SHORTHORN COW, " MORPHIE PRINCESS ROYAL " 244,901.

Winner of President's Medal for best Shorthorn animal, Inverness Show, 1948. Bred by and the property of Mr W. L. Anderson, Morphie, Montrose. Age six years and four months.



Fig. 12. — ABERDEEN-ANGUS COW, " EUTHALLA 2ND OF DOUNESIDE " 131,342.

Winner of President's Medal for best Aberdeen-Angus animal, Inverness Show, 1948. Bred by and the property of MacRobert Farms (Douneside) Ltd., Tarland, Aberdeenshire. Age six years and five months.



Fig. 13.— GALLOWAY HEIFER, "TROQUHAIN OF NETHER RUSKO" 45,040.

Winner of President's Medal for best Galloway animal, Inverness Show, 1948. The property of Mr John L. Dalrymple, The White House, Balcombe, Sussex. Bred by Mr Andrew Fergusson, Nether Rusko, Gatehouse-of-Fleet. Age two years and two months.



Fig. 14.— BELTED GALLOWAY BULL "CLOBURN SMUTS" 1541 B.

Winner of President's Medal for best Belted Galloway animal, Inverness Show, 1948. Bred by and the property of Mr D. R. Clarkson, Cloburn, Thankerton, Biggar. Age five years and ten months.



Fig. 15. HIGHLAND BULL, "UALLACH OF ACHNAOLOICH" 4175.

Winner of President's Medal for best Highland animal, Inverness Show, 1948. The property of Mr William Walker, J.P., of Foreland, Bruchbadlich, Islay. Bred by Mr T. E. Nelson, Achnaoloch, Connel, Argyll. Age one year and three months.



Fig. 16. AYRSHIRE COW, "BALIG QUEEN" 47,623.

Winner of President's Medal for the best Ayrshire animal, Inverness Show, 1948. The property of Mr Dudley Beck, Darland Hall, Rossett, near Wrexham. Bred by Mr Thomas Black, Balig, Doonfoot, Ayr. Age six years and four months.



Fig. 17. BRITISH FRIESIAN COW, " CRAIGIEMAINS VICTORIA 29TH " 377,568 R.M.P.

Winner of President's Medal for the best British Friesian animal, Inverness Show, 1948. Bred by and the property of Mr James Kilpatrick, Craigie Mains, Kilmarnock. Age three years and one month.

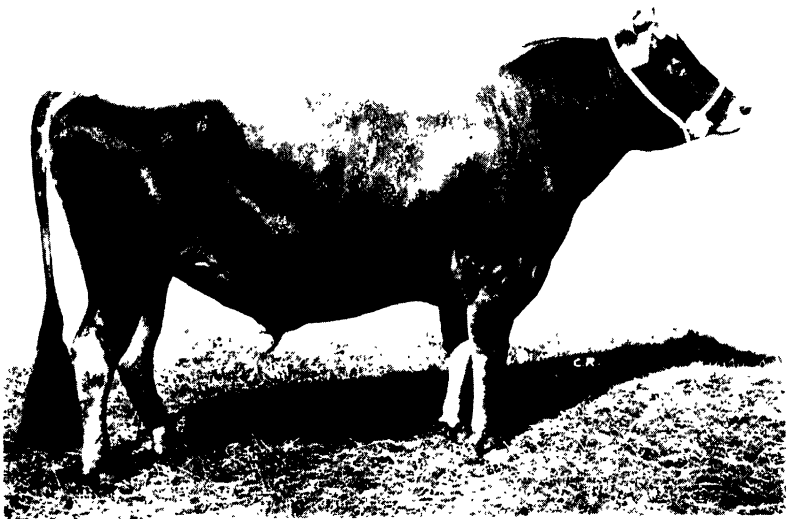


Fig. 18.—JERSEY BULL, " SNAILWELL ARISTOCRAT 4TH " 24,750.

Winner of President's Medal for the best Jersey animal, Inverness Show, 1948. The property of Mr W. U. Goodbody, Invergarry House, Invergarry. Bred by Mr H. L. Webb, Snailwell, Newmarket. Age three years and two months.



Fig. 19. CLYDESDALE STALLION, "GARTNESS UTILITY" 24,280.

Winner of President's Medal for the best Clydesdale Stallion or Colt, Inverness Show, 1948. The property of Messrs G. & J. Campbell, Gartness Farm, Balton. Bred by Messrs John More & Sons, The Bield, Gargunnoch. Age four years.



Fig. 20. CLYDESDALE GELDING, "CLADE."

Winner of President's Medal for best Clydesdale Gelding, Inverness Show, 1948. The property of Mr William B. Bryce, Cambusdrennie, by Stirling. Bred by Mr William Nisbet, Garwhilling, Kilmarnock. Age four years.



Fig. 21. —CLYDESDALE FILLY, "COWDEN PRIMULA."

Winner of President's Medal for best Clydesdale Mare or Filly, Inverness Show, 1948. The property of Mr Andrew Sommerville, Wester Cowden, Dalkeith. Bred by Mr John M. Mitchell, Strath Farm, Campbeltown. Age two years and two months.



Fig. 22. HUNTER GELDING, "DARRINGTON."

Winner of President's Medal for best Hunter, Inverness Show, 1948. The property of Mr John L. Dalrymple, The White House, Balcombe, Sussex.

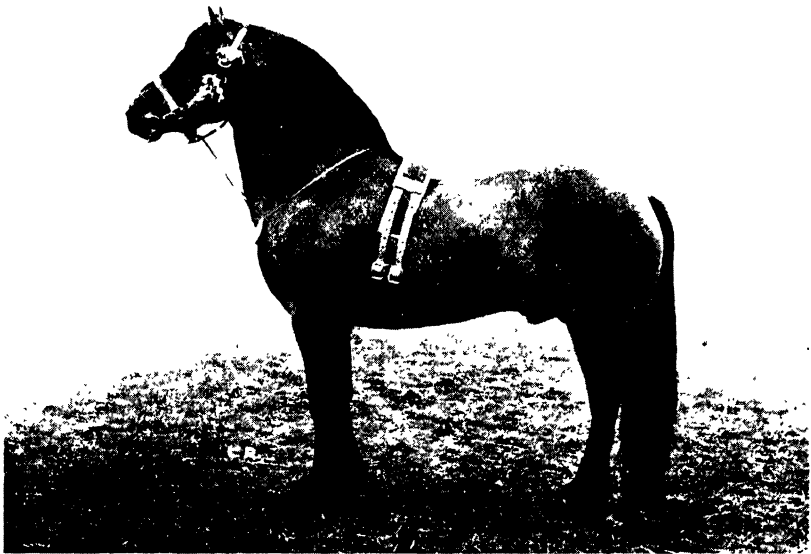


Fig. 23. HIGHLAND PONY STALLION, "GLENALMOND" 2395.

Winner of President's Medal for best Highland or Western Island Pony, Inverness Show, 1918. Bred by and the property of the Department of Agriculture for Scotland. Age ten years.



Fig. 24. SHETLAND PONY STALLION, "HARVIESTOUN BEACHDAIR."

Winner of President's Medal for best Shetland Pony, Inverness Show, 1948. Bred by and the property of Mr J. E. Kerr, C.B.E., Harviestoun, Dollar. Age four years.



Fig. 25. BLACKFACE TUP.

Winner of President's Medal for best Blackface Sheep, Inverness Show, 1918. The property of Mr A. L. P. F. Wallace of Can Letaig, Strathdon. Bred by Mr A. Dunlop, Parishholm, Douglas. Age three shear.



- CHEVIOT TUP, "LUCKY LAD."

Winner of President's Medal for best Cheviot Sheep, Inverness Show, 1918. The property of Mr George Hedley, Nether Horsburgh, Innerleithen. Bred by Messrs Hall & Son, Wooler Common, Wooler. Age three shear.



Fig. 27. NORTH COUNTRY CHEVIOT TUP, "MIGHTY FINE."

Winner of President's Medal for best North Country Cheviot Sheep, Inverness Show, 1948. The property of Mr William MacGillivray, Glastullich, Nigg, Ross-shire. Bred by Messrs John & D. P. MacGillivray, Calrossie, Nigg, Ross-shire. Age two shear.



Fig. 28.—BORDER LEICESTER TUP, "KING O' CARRICK" 14,084.

Winner of President's Medal for best Border Leicester Sheep, Inverness Show, 1948. The property of Mr T. Black, Balig, Ayr. Bred by Mr James Findlay, Bogardo, Forfar. Age three shear.



Fig. 29. HALF-BRED EWE.

Winner of President's Medal for best Half-bred Sheep, Inverness Show, 1918. Bred by and the property of Mr William Sandilands, Charterhouse, Kelso. Age three shear.



Fig. 30. OXFORD DOWN TUP LAMB.

Winner of President's Medal for best Oxford Down Sheep, Inverness Show, 1948. Bred by and the property of Mr W. F. Osborne, Hatton, Leven.



Fig. 31. SUFFOLK TUP, "BENACRE UMPIRE" 28,956.

Winner of President's Medal for best Suffolk Sheep, Inverness Show, 1948. The property of Mr Alexander R. Turnbull, East Cammo Meikle. Bred by Colonel Sir Robert E. S. Goch, Bt., D.S.O., Benacre Hall, Wrentham, Beccles, Suffolk. Age two shear.



Fig. 32. SAANEN MALE GOAT, "KILDALE OSSIAN" S 987.

Winner of President's Medal for best animal in the Goat Classes, Inverness Show, 1948. The property of Mrs E. G. M'Lagan, 36 Mannerston, Blackness, Linlithgow. Bred by Miss C. H. Edwards, Wooden Walls, Brisco, Carlisle. Age three years and four months.



Fig. 33. LARGE WHITE SOW, "MONCUR CHAMPION LADY 17TH."

Winner of President's Medal for best Large White Pig, Inverness Show, 1948. Bred by and the property of Mr G. C. Taylor, Moncur Farm, Inchtute, Perthshire. Age two years and five months.

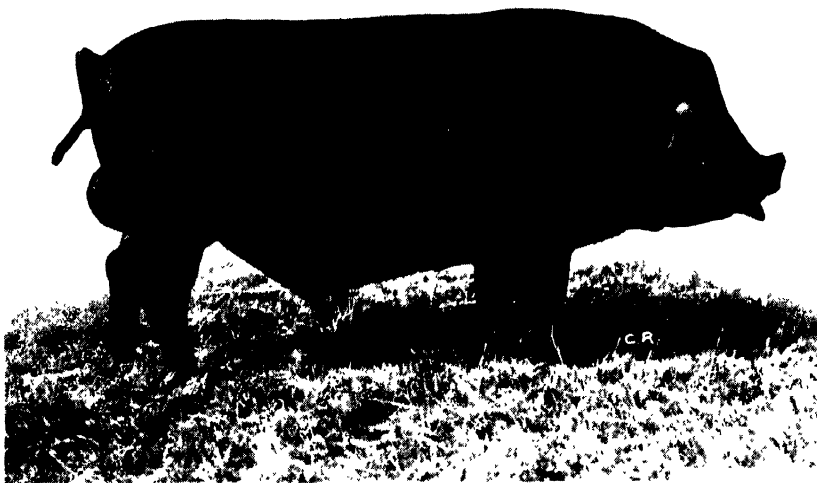


Fig. 34.—LARGE BLACK BOAR, "THELVEYTON MALCOLM 1ST" BA 59.

Winner of President's Medal for best Large Black Pig, Inverness Show, 1948. The property of Mr D. I. Low-Mitchell, Clochtow, Forfar. Bred by Sir John Mann, Bt., Thelveton Hall Diss, Norfolk. Age one year and five months.

PREMIUMS AWARDED BY THE SOCIETY IN 1948.

INVERNESS SHOW.

22nd, 23rd, 24th, and 25th June 1948.

ABBREVIATIONS.—V., *Very Highly Commended*. H., *Highly Commended*.
C., *Commended*.

CATTLE.

SHORTHORN.

PRESIDENT'S CHAMPION MEDAL for best Shorthorn Animal.

No. 28 Anderson, W. L., Morphie, Montrose, "Morphie Princess Royal"
(244,901).

Reserve—No. 39 MacGillivray, John & D. P., Calrossie, Nigg, Ross-shire,
Heifer, "Glastullich Claretta" (Vol. 93).

Fife and Kinross Perpetual Gold Challenge Cup, value £500, for best *Animal in the Shorthorn Classes*, "*Extra Stock*" eligible to compete. This Cup, along with an endowment of £400, was subscribed for by the Counties of Fife and Kinross in commemoration of the Society's first Show at Cupar, Fife, in 1912.

No. 28 Anderson, W. L., Morphie, Montrose, "Morphie Princess Royal"
(244,901).

Reserve—No. 39 MacGillivray, John & D. P., Calrossie, Nigg, Ross-shire,
Heifer, "Glastullich Claretta" (Vol. 93).

The Duthie Perpetual Challenge Cup, value £220, for best *Animal in the Shorthorn Classes*, "*Extra Stock*" eligible to compete. This Cup was gifted by the late Mr William Duthie, Collynie.

No. 28 Anderson, W. L., Morphie, Montrose, "Morphie Princess Royal"
(244,901).

The Eduardo Bullrich Silver Challenge Cup, value £150, for the best pair of Animals in the Shorthorn Classes, consisting of one Male and one Female of any age, bred by Exhibitor, "Extra Stock" eligible to compete. Presented by Messrs Adolfo Bullrich & Co., of Buenos Aires, through the Shorthorn Society.

Nos. 13, 34 Linzee-Gordon, Mrs B. H., Cluny Castle, Monymusk, Aberdeenshire.

Silver Cup, value £75, for the best Group of three Animals in the Shorthorn Classes, consisting of one Bull and two Females, "Extra Stock" eligible to compete. Given by Mr William M'Nair Snadden, M.P., of The Coldoch, Blair Drummond, Stirling.

Nos. 12, 33, 45 Durno, James, Uppermill, Tarves, Aberdeenshire.

The Duthie Prize, value about £30, for the best Group of three Animals entered in the Shorthorn Classes, either got by the same sire or from the same dam, or comprising a Bull with two of his progeny, or a Cow with two of her progeny. All the animals to be the property of the same Exhibitor. "Extra Stock" eligible to compete. Annual Free Income from a legacy bequeathed to the Society by the late Mr J. Duthie Webster to provide a Prize for Shorthorn Cattle at the Society's Annual Show.

Nos. 22, 46, 59 Fletcher, Captain A. M. Talbot, Saltoun Hall, Pencaitland, East Lothian.

The Emilio R. Casares, jun., "Junior Memorial Champion Cup," value £80, for best Shorthorn Bull in Class 4, calved on or after 1st April of the year preceding the year of the Show, that has passed the tuberculin test. Given by Messrs J. Baird & Co. (Falkirk), Ltd., Bantaskin, Falkirk.

No. 27 Salvesen, Dr C. G. A., Glassel, Aberdeenshire, "Glassel Extensor."

Best Shorthorn Bull in the Show, entered in or for Coates's Herd-Book—£20, given by the Shorthorn Society.

No. 1 Cameron, James, Balnakyle, Munloch, Ross-shire, "Bapton Uprise" (329,350).

Silver Medal to the Breeder of the winner of above Prize—given by the Shorthorn Society.

No. 1 Rank, J. V., Delaware, Edenbridge, Kent.

Breeder of best Bull of any age in Classes 1 to 4 ("Extra Stock" not eligible to compete)—The Silver Medal.

No. 1 Rank, J. V., Delaware, Edenbridge, Kent.

CLASS 1. BULL, born before 1st December 1945.—
PREMIUMS, £15, £10, £5, and £3.

- 1st No. 1 Cameron, James, Balnakyle, Munlochy, Ross-shire, "Bapton Uprise" (329,350).
2nd No. 4 Marshall, Albert James, Bridgebank, Stranraer, "Cruggleton Adjuster" (315,395).
3rd No. 5 Marshall, Albert James, Bridgebank, Stranraer, "Cruggleton Annexe" (328,335).
4th No. 7 Moubray, Major R., Naemoor Home Farm, Rumbling Bridge, Kinross-shire, "Cruggleton Prince Bob" (328,406).
V No. 8 Reid, J. N., Cromleybank, Ellon, Aberdeenshire, "Naemoor Jackdaw" (321,839).
H No. 3 MacGillivray, Finlay, Greenhead, Pencaitland, East Lothian, "Pittodrie Regalia" (322,951).

CLASS 2. BULL, born on or after 1st December 1945 and before 1st December 1946.—PREMIUMS, £15, £10, £5, and £3.

- 1st No. 9 Linzee-Gordon, Mrs B. H., Cluny Castle, Monymusk, Aberdeenshire, "Chapelton Crusader" (Vol. 93).
2nd No. 10 Marshall, Albert James, Bridgebank, Stranraer, "Cruggleton Agency" (Vol. 93).

CLASS 3. BULL, born on or after 1st December 1946 and before 1st April 1947.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 16 Roberts, Sir James Denby, Bt., Strathallan Castle, Auchterarder, "Calrossie Knock-out" (Vol. 94).
2nd No. 12 Durno, James, Uppermill, Tarves, Aberdeenshire, "Saltoun Red Ensign" (Vol. 94).
3rd No. 13 Linzee-Gordon, Mrs B. H., Cluny Castle, Monymusk, Aberdeenshire, "Cluny Bright Star" (Vol. 94).
4th No. 17 Wilson, Douglas, Mains of Corsindae, Sauchen, Cluny, Aberdeenshire, "Corsindae Enterprise" (Vol. 94).
V No. 14 Maclean, Captain R., Drynie, North Kessock, Inverness, "Drynie Conquest" (Vol. 94).
H No. 15 MacWilliam, W. D., Drummondreach, Canon Bridge, Ross-shire, "Glassel Embolus" (Vol. 94).

CLASS 4. BULL, born on or after 1st April 1947.
PREMIUMS, £10, £6, £4, and £2.

- 1st No. 27 Salvesen, Dr C. G. A., Glassel, Aberdeenshire, "Glassel Extensor."
2nd No. 22 Fletcher, Captain A. M. Talbot, Saltoun Hall, Pencaitland, East Lothian, "Saltoun Royal Empire."
3rd No. 25 MacWilliam, W. D., Drummondreach, Canon Bridge, Ross-shire, "Cluny Warspite."
4th No. 24 Lovat, Lord, D.S.O., M.C., Beaufort Castle, Beaulieu, Inverness-shire, "Pittodrie Remembrance."
V No. 26 Reid, J. N., Cromleybank, Ellon, Aberdeenshire, "Cromleybank Cash Box."
H No. 23 Hardie, Lieut.-Colonel S. J. L., D.S.O., Ballathie, Stanley, Perthshire, "Ballathie Orion."
C No. 18 Baird, Alexander A., Bantaskin, Falkirk, "Bantaskin Fortress."

Best Shorthorn Female in the Show, entered in or for Coates's Herd-Book—£20, given by the Shorthorn Society.

No. 28 Anderson, W. L., Morphie, Montrose, "Morphie Princess Royal" (244,901).

Silver Medal to the Breeder of the winner of above Prize—given by the Shorthorn Society.

No. 28 Anderson, W. L., Morphie, Montrose.

CLASS 5. COW, in Milk, born before 1st December 1944.—

PREMIUMS, £12, £8, £4, and £2.

1st No. 28 Anderson, W. L., Morphie, Montrose, "Morphie Princess Royal" (244,901).

2nd No. 30 MacGillivray, John & D. P., Calrossie, Nigg, Ross-shire, "Calrossie Honora Broadhooks" (275,167).

3rd No. 31 Macpherson, C., Buttermere, Brechin, "Marden Princess Royal 10th" (260,185).

4th No. 32 Roberts, Sir James Denby, Bt., Strathallan Castle, Auchterarder, "Strathallan Lady Rosewood 7th" (277,552).

CLASS 6. COW, in Milk, born on or after 1st December 1944 and before 1st December 1945.—PREMIUMS, £10, £5, £3, and £2.

1st No. 33 Durno, James, Uppermill, Tarves, Aberdeenshire, "Princess Martha" (271,458).

2nd No. 34 Linzee-Gordon, Mrs B. H., Cluny Castle, Monymusk, Aberdeenshire, "Cluny Beauty 33rd" (285,549).

CLASS 7. COW or HEIFER, born on or after 1st December 1945 and before 1st December 1946.—PREMIUMS, £10, £5, £3, and £2.

1st No. 39 MacGillivray, John & D. P., Calrossie, Nigg, Ross-shire, Heifer, "Glastullich Claretta" (Vol. 93).

2nd No. 37 Grigor, J. M., Lentrán House, Lentrán, Inverness-shire, Heifer, "Stackpole Eliza Jane" (Vol. 93).

3rd No. 42 Sleigh, John L., Tolquhon, Tarves, Aberdeenshire, Cow, "Tolquhon Rosewood Baroness" (Vol. 93).

4th No. 36 Grigor, J. M., Lentrán House, Lentrán, Inverness-shire, Cow, "Beaufort Augusta 3rd" (Vol. 93).

CLASS 8. HEIFER, born on or after 1st December 1946 and before 1st April 1947.—PREMIUMS, £10, £5, £3, and £2.

1st No. 45 Durno, James, Uppermill, Tarves, Aberdeenshire, "Princess Minerva" (Vol. 93).

2nd No. 55 Lovat, Lord, D.S.O., M.C., Beaufort Castle, Beaully, Inverness-shire, "Princess Pamela" (Vol. 94).

3rd No. 51 Hardie, Lieut.-Colonel S. J. L., D.S.O., Ballathie, Stanley, Perthshire, "Crocus Crystal" (Vol. 94).

4th No. 57 Macpherson, C., Buttermere, Brechin, "Beaufort Lancaster 34th" (Vol. 94).

V No. 43 Anderson, W. L., Morphie, Montrose, "Morphie Princess Margaret" (Vol. 94).

II No. 46 Fletcher, Captain A. M. Talbot, Saltoun Hall, Pencaitland, East Lothian, "Saltoun Pauline 6th" (Vol. 94).

C No. 47 Fletcher, Captain A. M. Talbot, Saltoun Hall, Pencaitland, East Lothian, "Saltoun Princess Roma" (Vol. 94).

CLASS 9. HEIFER, born on or after 1st April 1917.—
PREMIUMS, £10, £5, £3, and £2.

- 1st No. 61 Lovat, Lord, D.S.O., M.C., Beaufort Castle, Beauly, Inverness-shire, "Barquhar Golden Ray."
 2nd No. 62 Rutherford, Captain G. G., Baldowie, Coupar Angus, "Baldowie Broadhooks."
 3rd No. 59 Fletcher, Captain A. M. Talbot, Saltoun Hall, Pencaitland, East Lothian, "Saltoun Queen Clara 2nd."
 4th No. 60 Keir & Cawder Estates, Ltd., Keir, Dunblane, "Keir Clipper Mary."
 V No. 64 Stewart, Duncan M., Millhills, Crieff, "Millhills Rosebud 6th."

ABERDEEN-ANGUS.

PRESIDENT'S CHAMPION MEDAL
for best Aberdeen-Angus Animal.

- No. 87 MacRobert Farms (Douneside), Ltd., Lalimli, Tarland, Aberdeenshire, "Euthalla 2nd of Douneside" (131,342).

Reserve— No. 73 Sainsbury, J., Ltd., Kinermony Farm, Aberlour, Banffshire, "Pinocchio of Gaidrew" (125,789).

Silver Cup, value £75, for best Group of Aberdeen-Angus Cattle, consisting of one Bull and two Females, "Extra Stock" not eligible to compete. Given by Mr J. E. Kerr of Harviestoun, Dollar.

- Nos. 80, 87, 113 MacRobert Farms (Douneside), Ltd., Lalimli, Tarland, Aberdeenshire.

Silver Cup, value £80, for best Aberdeen-Angus Bull born on or after 1st December 1945. Given by the late Senor Eduardo Estanguet, Argentina

- No. 73 Sainsbury, J., Ltd., Kinermony Farm, Aberlour, Banffshire, "Pinocchio of Gaidrew" (125,789).

Breeder of best Bull of any age in Classes 10 to 13 ("Extra Stock" not eligible to compete)—The Silver Medal.

- No. 73 Donald, William, Gaidrew, Drymen.

Ballindalloch Challenge Cup, value £110, for the best Bull of any age in Classes 10 to 13. Presented by the late Sir George Macpherson Grant, Bt.

- No. 73 Sainsbury, J., Ltd., Kinermony Farm, Aberlour, Banffshire, "Pinocchio of Gaidrew" (125,789).

Exhibitor of the Winner of the Ballindalloch Challenge Cup—The Silver Medal.

- No. 73 Sainsbury, J., Ltd., Kinermony Farm, Aberlour, Banffshire.

Breeder (if not also the Exhibitor) of the Winner of the Ballindalloch Challenge Cup—The Silver Medal.

No. 73 Donald, William, Gaidrew, Drymen.

Champion Medal, *for best Animal in the Breeding Classes, breeding animals shown as "Extra Stock" eligible to compete.* Given by the Aberdeen-Angus Cattle Society.

No. 87 MacRobert Farms (Douneside), Ltd., Lalimli, Tarland, Aberdeenshire, "Euthalla 2nd of Douneside" (131,342).

CLASS 10. BULL, born before 1st December 1945.—
PREMIUMS, £15, £10, £5, and £3.

- 1st No. 65 Elgin and Kincardine, The Earl of, K.T., C.M.G., Broomhall, Dunfermline, "Aclurya Ward" (122,598).
- 2nd No. 67 Mitchell, William, Incheoch, Alyth, Perthshire, "Eisenhower of Bleaton" (124,325).
- 3rd No. 68 Sainsbury, J., Ltd., Kinermony Farm, Aberlour, Banffshire, "Evaldite of Dalmeny" (122,292).
- 4th No. 66 Gaul, John, Wrae, Turriff, Aberdeenshire, "Bulldozer of Hatton" (120,955).
- V No. 69 Templeton, M., Charterhouse, Kelso, "Bardia of Haymount" (122,876).

CLASS 11. BULL, born on or after 1st December 1945 and before 1st December 1946.—PREMIUMS, £15, £10, £5, and £3.

- 1st No. 73 Sainsbury, J., Ltd., Kinermony Farm, Aberlour, Banffshire, "Pinocchio of Gaidrew" (125,789).
- 2nd No. 72 Dunlop, A. Logan, Morriston, Maidens, Ayrshire, "Kinarex of Auchterarder" (127,187).
- 3rd No. 70 Allendale, Viscount, Bywell Hall, Stocksfield - on - Tyne, "Matthew of Strathkinness" (125,362).
- 4th No. 71 Crockett, James Balfour, Peebles Farm, Arbroath, "Rex of Cobairdy" (125,841).

CLASS 12. BULL, born on or after 1st December 1946 and before 1st March 1947.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 75 Beddie, Alexander, Banks, Strichen, Aberdeenshire, "Esstone of Bleaton" (129,385).
- 2nd No. 76 Gordon-Duff, Major J. B., M.B.E., Cobairdy Homo Farm, Huntly, "Stype Pirate" (129,731).
- 3rd No. 80 MacRobert Farms (Douneside), Ltd., Lalimli, Tarland, Aberdeenshire, "Europic of Douneside" (129,197).
- 4th No. 79 Macpherson-Grant, Sir George, Bt., of Ballindalloch, Banffshire, "Black Jude of Ballindalloch" (128,691).
- V No. 74 Allan, D. M., Ballintomb, Grantown-on-Spey, "Halkon of Auldich" (129,948).
- H No. 77 Grant, A. D., Georgetown, Blacksboat, Grantown-on-Spey, "Profit of Georgetown" (128,675).

CLASS 13. BULL, born on or after 1st March 1947.—
PREMIUMS, £10, £6, £4, and £2.

- 1st No. 82 Elgin and Kincardine, The Earl of, K.T., C.M.G., Broomhall, Dunfermline, " Brose of Broomhall " (Vol. 73).
 2nd No. 81 Dixon, Major A. M., Ledcameroch, Dunblane, Perthshire, " Julian Eric of Arras " (129,132).
 3rd No. 84 Stewart, Captain J. C., C.B.E., Murdostoun Castle, Newmains, " Gaunt of Murdostoun " (129,916).
 4th No. 83 M'Onie, Robert, Cragganmore, Ballindalloch, Banffshire, " Proud Barentu of Kinchurdy " (128,101).

Harviestoun Challenge Cup, value £75, for the best Cow of any age in Classes 14 to 16. Presented by Mr J. E. Kerr of Harviestoun, Dollar.

- No. 87 MacRobert Farms (Douneside), Ltd., Lalimli, Tarland, Aberdeenshire, " Euthalla 2nd of Douneside " (131,342).

Exhibitor of the Winner of the Harviestoun Challenge Cup— The Silver Medal.

- No. 87 MacRobert Farms (Douneside), Ltd., Lalimli, Tarland, Aberdeenshire.

Breeder (if not also the Exhibitor) of the Winner of the Harviestoun Challenge Cup— The Silver Medal.

Not awarded.

Silver Cup, value £75, for the best Female Animal of the Aberdeen-Angus breed, " Extra Stock " eligible to compete. Presented by the late Mr Falconer L. Wallace of Candacraig, Strathdon.

- No. 87 MacRobert Farms (Douneside), Ltd., Lalimli, Tarland, Aberdeenshire, " Euthalla 2nd of Douneside " (131,342).

CLASS 14. COW, in Milk, born before 1st December 1944.—
PREMIUMS, £12, £8, £4, and £2.

- 1st No. 87 MacRobert Farms (Douneside), Ltd., Lalimli, Tarland, Aberdeenshire, " Euthalla 2nd of Douneside " (131,342).
 2nd No. 86 Goodson, Sir Alfred L., Bt., Kilham, Mindrum, Northumberland, " Eulima 40th of Kilham " (138,012).
 3rd No. 89 Rosebery and Midlothian, The Earl of, K.T., P.C., D.S.O., M.C., Dalmeny Home Farm, Dalmeny House, Edinburgh, " Pearama of Dalmeny " (129,555).
 4th No. 90 Sainsbury, J., Ltd., Kinermory Farm, Aberlour, Banffshire, " Elanda of Nisbethill " (135,290).
 V No. 91 Spencer-Nairn, Major Sir Robert, Bt., Leslie House Home Farm, Leslie, Fife, " Pride of Padros " (128,287).

CLASS 15. COW, in Milk, born on or after 1st December 1944 and before 1st December 1945.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 92 Hutchison-Bradburne, Mrs R. G., Cunnoquhie, Ladybank, Fife, "Judic Erica of Douneside" (138,649).
 2nd No. 93 Spencer-Nairn, Major Sir Robert, Bt., Leslie House Home Farm, Leslie, Fife, "Ermo of Edenwood" (137,419).
 3rd No. 94 Templeton, M., Charterhouse, Kelso, "Pride of Fleetham" (138,503).

CLASS 16. COW or HEIFER, born on or after 1st December 1945 and before 1st December 1946.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 97 Beddie, Alexander, Banks, Strichen, Aberdeenshire, Heifer, "Gammer Eulona" (139,991).
 2nd No. 100 Mitchell, William, Incheoch, Alyth, Perthshire, Heifer, "Joy of Bleaton" (141,602).
 3rd No. 101 Rosebery and Midlothian, The Earl of, K.T., P.C., D.S.O., M.C., Dalmeny Home Farm, Dalmeny House, Edinburgh, Heifer, "Evilma of Dalmeny" (142,061).
 4th No. 98 Goodson, Sir Alfred L., Bt., Kilham, Mindrum, Northumberland, Heifer, "Eulima 47th of Kilham" (140,719).
 V No. 99 Lovat, Lord, D.S.O., M.C., Beaufort Castle, Beaulieu, Heifer, "Edwiveena 4th of Charterhouse" (142,296).
 H No. 103 Waddell, James D., Clury, Grantown-on-Spey, Heifer, "Aclurya Ebbril" (142,411).
 C No. 95 Aikman, James S., Claggersnich, Cromdale, Morayshire, Heifer, "Gadella of Claggersnich" (139,783).
 C No. 96 Allendale, Viscount, Bywell Hall, Stocksfield-on-Tyne, Heifer, "Pridelle of Bywell" (139,840).
 C No. 102 Waddell, James D., Clury, Grantown-on-Spey, Heifer, "Aclurya Estreb" (142,412).

CLASS 17. HEIFER, born on or after 1st December 1946 and before 1st March 1947.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 114 Mason, Michael, Scotts House, Eynsham Park, Witney, Oxon., "Judi Erica of Eynsham" (144,356).
 2nd No. 107 Dixon, Major A. M., Ledcameroch, Dunblane, Perthshire, "Juanita Erica of Broadleys" (143,199).
 3rd No. 113 MacRobert Farms (Douneside), Ltd., Lalimli, Tarland, Aberdeenshire, "Euthalla 3rd of Douneside" (144,181).
 4th No. 108 Elgin and Kincardine, The Earl of, K.T., C.M.G., Broomhall, Dunfermline, "Edwina of Broomhall" (143,328).
 V No. 118 Rosebery and Midlothian, The Earl of, K.T., P.C., D.S.O., M.C., Dalmeny Home Farm, Dalmeny House, Edinburgh, "Evabon 2nd of Dalmeny" (144,820).
 H No. 117 Reid, Sir Douglas N., Bt., Auchterarder House, Auchterarder, Perthshire, "Pretty Pride of Spey" (144,171).
 C No. 104 Aikman, James S., Claggersnich, Cromdale, Morayshire, "Eulogy of Claggersnich" (142,642).
 C No. 106 Beddie, Alexander, Banks, Strichen, Aberdeenshire, "Gammer Eudine" (142,850).
 C No. 115 Mitchell, William, Incheoch, Alyth, Perthshire, "Eleanor of Incheoch" (144,403).
 C No. 116 Niven, John, Gloagburn, Tibbermore, Perth, "Winkle of Gloagburn" (144,545).
 C No. 119 Templeton, M., Charterhouse, Kelso, "Pride 4th of Charterhouse" (145,101).
 C No. 121 Waddell, James D., Clury, Grantown-on-Spey, "Aclurya Estelle" (145,227).
 C No. 122 Waddell, James D., Clury, Grantown-on-Spey, "Aclurya Welsome" (145,234).

CLASS 18. HEIFER, born on or after 1st March 1947.—
PREMIUMS, £10, £5, £3, and £2.

- 1st No. 124 Allendale, Viscount, Bywell Hall, Stocksfield-on-Tyne,
"Evance of Bywell" (142,685).
2nd No. 128 James, W. L. & W. M., Marcassie, Forres, "Winsome Witch
of Marcassie" (143,931).
3rd No. 131 Wallace, Mrs, Candacraig, Strathdon, Aberdeenshire,
"Equeefa of Candacraig" (145,258).
4th No. 130 Templeton, M., Charterhouse, Kelso, "Edwiveena 6th of
Charterhouse" (145,095).
V No. 125 Beddie, Alexander, Banks, Strichen, Aberdeenshire, "Roma-
lisa of Banks" (142,858).
H No. 126 Dickie, Charles H., Highbridge Hall, Kelso, "Giralda of
Charterhouse" (145,099).

GALLOWAY.

PRESIDENT'S CHAMPION MEDAL.
for best Galloway Animal.

- No. 147 Dalrymple, John L., The White House, Balcombe, Sussex, Heifer,
"Troquhain of Nether Rusko" (45,040).

Reserve—No. 134 M'Turk, Thomas, Gateside, Lochfoot, Dumfries,
"Thorniehill Marksman" (23,014).

Dr Gillespie Memorial Challenge Trophy, value £120, *for best Galloway Animal in the Breeding Classes, breeding animals shown as "Extra Stock" eligible to compete.* Presented by the Galloway Cattle Society of Great Britain and Ireland.

- No. 147 Dalrymple, John L., The White House, Balcombe, Sussex, Heifer,
"Troquhain of Nether Rusko" (45,040).

Silver Challenge Cup, value £75, *for best Animal of the sex opposite to that of the winner of the Dr Gillespie Memorial Challenge Trophy, "Extra Stock" eligible to compete.* Presented by the Galloway Cattle Society to commemorate the Hundredth Show.

- No. 134 M'Turk, Thomas, Gateside, Lochfoot, Dumfries, "Thorniehill Marksman" (23,014).

Breeder of best Bull of any age in Classes 19 and 20 ("Extra Stock" not eligible to compete)—The Silver Medal.

- No. 134 Gilchrist, Miss S., Thorniehill, Balmaclellan, Castle-Douglas.

CLASS 19. BULL, born before 1st December 1946.—
PREMIUMS, £15, £10, £5, and £3.

- 1st No. 134 M'Turk, Thomas, Gateside, Lochfoot, Dumfries, "Thorniehill Marksman" (23,014).
2nd No. 132 Buccleuch Estates, Ltd., Holystone, Thornhill, Dumfriesshire, "Tannoch of Knocknarling" (22,690).
3rd No. 133 Dalrymple, John L., The White House, Balcombe, Sussex, "Xenial of Knocknarling" (23,853).

CLASS 20. BULL, born on or after 1st December 1946.—
PREMIUMS, £12, £8, £4, and £2.

- 1st No. 137 Graham, C. E., Chapel of Logan, Canonbie, Dumfriesshire, "Culmark Ace" (24,250).
2nd No. 136 Duncan, W. & A. B., Gilchristland, Closeburn, Dumfriesshire, "Rajah of Gilchristland" (24,160).
3rd No. 138 Graham, C. E., Chapel of Logan, Canonbie, Dumfriesshire, "Logan Emperor" (24,463).

CLASS 21. COW, in Milk, born before 1st December 1945.—
PREMIUMS, £12, £8, £4, and £2.

- 1st No. 145 Wilson, Peter, Tundergarth Mains, Lockerbie, "Marina of Tundergarth Mains" (42,294).
2nd No. 141 Buchanan-Jardine, Sir John William, of Castlemilk, Bt., Castle Milk, Lockerbie, "Mignonette of Castle Milk" (42,391).
3rd No. 143 Gourlay Farming Co., The Ford, Tynron, Dumfriesshire, "Zellah 4th of Kirkland" (38,136).
4th No. 142 Duncan, W. & A. B., Gilchristland, Closeburn, Dumfriesshire, "Nora 5th of Gilchristland" (40,419).
V No. 144 Moffat, Major T. W., Kennedy, M.C., Auchencheyne, Moniaive, Dumfriesshire, "Craigston Elizebeth" (dun) (44,619).
H No. 140 Buccleuch Estates, Ltd., Holystone, Thornhill, Dumfriesshire, "Melbrake of Drumlanrig" (41,070).

CLASS 22. COW or HEIFER, born on or after 1st December 1945 and before 1st December 1946.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 147 Dalrymple, John L., The White House, Balcombe, Sussex, Heifer, "Troquhain of Nether Rusko" (45,040).
2nd No. 152 Moffat, Major T. W. Kennedy, M.C., Auchencheyne, Moniaive, Dumfries, Heifer, "Lulu of Lochurr" (45,362).
3rd No. 150 Graham, C. E., Chapel of Logan, Canonbie, Dumfriesshire, Heifer, "Lady Logan 14th" (45,514).
4th No. 151 Graham, C. E., Chapel of Logan, Canonbie, Dumfriesshire, Heifer, "Logan Graceful" (45,515).
V No. 146 Buccleuch Estates, Ltd., Holystone, Thornhill, Dumfriesshire, Heifer, "Mayenne of Drumlanrig" (45,058).

CLASS 23. HEIFER, born on or after 1st December 1946 and before 1st March 1947.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 161 Wilson, Peter, Tundergarth Mains, Lockerbie, " Tweedshaws June " (45,994).
 2nd No. 156 Duncan, W. & A. B., Gilchristland, Closeburn, Dumfriesshire, " Olivet 3rd of Gilchristland " (45,744).
 3rd No. 159 Graham, C. E., Chapel of Logan, Canonbie, Dumfriesshire, " Lady Logan 18th " (46,455).
 4th No. 155 Buchanan-Jardine, Sir John William, of Castlemilk, Bt., Castle Milk, Lockerbie, " Corinna of Castle Milk " (dun) (45,823).
 V No. 160 Wilson, Peter, Tundergarth Mains, Lockerbie, " Blossom of Tundergarth Mains " (46,171).
 H No. 154 Buccleuch Estates, Ltd., Holestane, Thornhill, Dumfriesshire, " Blondie of Drumlanrig " (45,755).
 C No. 157 Gourlay Farming Co., The Ford, Tynron, Dumfriesshire, " Frances 4th of Craigmuir " (45,689).
 C No. 158 Graham, C. E., Chapel of Logan, Canonbie, Dumfriesshire, " Lady Logan 17th " (46,454).

CLASS 24. HEIFER, born on or after 1st March 1947.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 162 Buchanan-Jardine, Sir John William, of Castle Milk, Bt., Castle Milk, Lockerbie, " Cressida of Castle Milk " (dun) (45,833).
 2nd No. 163 Duncan, W. & A. B., Gilchristland, Closeburn, Dumfriesshire, " Rosary 5th of Gilchristland " (45,749).
 3rd No. 167 Graham, C. E., Chapel of Logan, Canonbie, Dumfriesshire, " Lady Logan 21st " (46,461).
 4th No. 166 Graham, C. E., Chapel of Logan, Canonbie, Dumfriesshire, " Lady Logan 20th " (46,460).
 V No. 165 Gourlay Farming Co., The Ford, Tynron, Dumfriesshire, " Fluffy 6th of Kirkland " (45,702).

BELTED GALLOWAY.

*PRESIDENT'S CHAMPION MEDAL
for best Belted Galloway Animal.*

- No. 172 Clarkson, D. R., Cloburn, Thankerton, Biggar, " Cloburn Smuts " (1451 B).

Reserve—No. 176 Brown, J. Douglas, Robertson, Kirkcudbright, " Robertson Argent " (7400 B).

Knockbren Challenge Cup, value £75, for the best Belted Galloway Animal, " Extra Stock " eligible to compete. This Cup was presented by Mrs Brown, Kirkbren, Glasgow, for the best Belted Galloway Animal registered in the *Dun and Belted Galloway Cattle Breeders' Association Herd-Book*, entered in any of the Breeding Classes, at the Show at which it may be competed for.

- No. 172 Clarkson, D. R., Cloburn, Thankerton, Biggar, " Cloburn Smuts " (1451 B).

The Ian Hamilton Silver Challenge Cup, value £75, for the best Belted Galloway Animal of the sex opposite to that of the winner of the Knockbrex Challenge Cup, "Extra Stock" eligible to compete. The winning animal to be registered or eligible for registration in the Dun and Belted Galloway Herd-Book. This Cup was presented by the late General Sir Ian Hamilton, G.C.B.

No. 176 Brown, J. Douglas, Robertson, Kirkcudbright, "Roberton Argent" (7400 B).

Breeder of best Bull in Class 25 ("Extra Stock" not eligible to compete)—The Silver Medal.

No. 172 Clarkson, D. R., Cloburn, Thankerton, Biggar.

CLASS 25. BULL, any age.—PREMIUMS, £10, £5, £3, and £2.

1st No. 172 Clarkson, D. R., Cloburn, Thankerton, Biggar, "Cloburn Smuts" (1451 B).

2nd No. 171 Brown, J. Douglas, Robertson, Kirkcudbright, "Roberton Baron" (1459 B).

3rd No. 173 Hamilton, Ian, Lowood, Melrose, "Lullenden Rhodes Scholar" (3643).

4th No. 168 Birnie, A., Wellbank, Peterhead, "Sudbrook Clover Leaf" (1389 B).

CLASS 26. COW or HEIFER, born before 1st December 1945, in Milk or in Calf; if in calf and not in milk, to calve on or before 1st December of the year of the Show.—PREMIUMS, £10, £5, £3, and £2.

1st No. 175 Brown, J. Douglas, Robertson, Kirkcudbright, Cow, "Knockbrex Precious" (3928 B).

2nd No. 174 Birnie, A., Wellbank, Peterhead, Cow, "Wellbank Sweet Violet" (6072 B).

CLASS 27. HEIFER, born on or after 1st December 1945.—PREMIUMS, £10, £5, £3, and £2.

1st No. 176 Brown, J. Douglas, Robertson, Kirkcudbright, "Roberton Argent" (7400 B).

2nd No. 177 Brown, J. Douglas, Robertson, Kirkcudbright, "Roberton Bessie" (7504 B).

HIGHLAND.

*PRESIDENT'S CHAMPION MEDAL
for best Highland Animal.*

No. 192 Walker, William, J.P., of Foreland, Bruichladdich, Isle of Islay, "Uallach of Achnacloich" (4475).

Reserve—No. 208 Walker, William, J.P., of Foreland, Bruichladdich, Isle of Islay, "Blarag of Foreland" (12,052).

Perpetual Victory Challenge Cup, approximate value £115, for the best *Animal in the Male Classes*, "*Extra Stock*" eligible to compete. Given by the Highland Cattle Society of Scotland.

No. 192 Walker, William, J.P., of Foreland, Bruichladdich, Isle of Islay, "Uallach of Achnacloich" (4475).

Breeder of best Bull in Classes 28 and 29 ("Extra Stock" not eligible to compete)—The Silver Medal.

No. 192 Nelson, T. E., Achnacloich, Connel, Argyll.

CLASS 28. BULL, born before 1st December 1946.—
PREMIUMS, £15, £10, £5, and £3.

- 1st No. 179 Morrison, Major John Granville, of Islay, M.P., Bridgend, Islay, "Coirneal of Barbreck" (4371).
- 2nd No. 178 Mansfield Estates, Scone Palace, Perth, "Creag-An-Or" (4168).
- 3rd No. 180 Trent, Lord, of Ardnamurchan, D.L., J.P., Glenborrodale Castle, Acharacle, Argyll, "Coirneal of Mingary" (4233).
- 4th No. 181 Trent, Lord, of Ardnamurchan, D.L., J.P., Glenborrodale Castle, Acharacle, Argyll, "Coirneal Curaideach of Mingary" (4516).
- V No. 182 Walker, Francis W., of Leys, Leys Castle, Inverness-shire, "Raibeart of Leys" (4431).
- H No. 183 Walker, Francis W., of Leys, Leys Castle, Inverness-shire, "MacCalla of Achnacloich" (4388).

CLASS 29. BULL, born on or after 1st December 1946.—
PREMIUMS, £12, £8, £4, and £2.

- 1st No. 192 Walker, William, J.P., of Foreland, Bruichladdich, Isle of Islay, "Uallach of Achnacloich" (4475).
- 2nd No. 189 North British Aluminium Co., Ltd. (Corryarrick Fold), Inverlochy Village, Fort William, "Corryarrick Ruairaidh" (4438).
- 3rd No. 186 Hardie, Lieut.-Colonel S. J. L., D.S.O., Ballathie, Stanley, Perthshire, "Calum Og of Ballathie" (4489).
- 4th No. 185 Dalgleish, James P., of Barbreck, Lochgilphead, Argyll, "Ailbeart of Barbreck" (4454).
- V No. 188 Mansfield Estates, Scone Palace, Perth, "Bodach of Barguilean" (4465).
- H No. 191 Trent, Lord, of Ardnamurchan, D.L., J.P., Glenborrodale Castle, Acharacle, Argyll, "Barran of Mingary" (4515).
- C No. 190 Roberts, Sir James Denby, Bt., Strathallan Castle, Auchterarder, "Seumas of Strathallan" (4464).

Perpetual Victory Challenge Cup, approximate value £75, for the best *Animal in the Female Classes*, "*Extra Stock*" eligible to compete. Given by the Highland Cattle Society of Scotland.

No. 208 Walker, William, J.P., of Foreland, Bruichladdich, Isle of Islay, "Blarag of Foreland" (12,052).

CLASS 30. COW, of any age, with Calf at foot.—
PREMIUMS, £12, £8, £4, and £2.

- 1st No. 199 Trent, Lord, of Ardnamurchan, D.L., J.P., Glenborrodale Castle, Acharacle, Argyll, "Baravalla II. of Mingary" (12,859).
- 2nd No. 194 Hardie, Lieut.-Colonel S. J. L., D.S.O., Ballathie, Stanley, Perthshire, "Stella II." (11,136).
- 3rd No. 197 North British Aluminium Co., Ltd. (Corryarrick Fold), Inverlochry Village, Fort William, "Annag Riabhach II. of Barbreck" (11,899).
- 4th No. 200 Walker, William, J.P., of Foreland, Bruichladdich, Isle of Islay, "Beitris of Foreland" (11,711).
- V No. 196 North British Aluminium Co., Ltd. (Corryarrick Fold), Inverlochry Village, Fort William, "Millicent XII. of Fanans" (12,100).
- H No. 195 Nelson, T. E., Achnacloich, Connel, Argyll, "Dossan Bheg II. of Achnacloich" (11,674).
- C No. 193 Dalgleish, James P., of Barbreck, Lochgilphead, Argyll, "Lady Bhuidhe II. of Barbreck" (11,548).

CLASS 31. HEIFER, born on or after 1st December 1944 and before 1st December 1945.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 208 Walker, William, J.P., of Foreland, Bruichladdich, Isle of Islay, "Blarag of Foreland" (12,052).
- 2nd No. 204 Mansfield Estates, Scone Palace, Perth, "Maiseach Malvina of Scone Palace" (12,064).
- 3rd No. 209 Walker, William, J.P., of Foreland, Bruichladdich, Isle of Islay, "Ribhinn II. of Foreland" (12,048).
- 4th No. 202 Brown, William Pearson, Alderley, Easingwold, Yorkshire, "Ribhinn III. of Easingwold" (12,117).
- V No. 201 Brown, William Pearson, Alderley, Easingwold, Yorkshire, "Lily XV. of Fanans" (12,205).
- H No. 206 Morrison, Major John Granville, of Islay, M.P., Bridgend, Islay, Argyll, "Cruinneag Ile VI." (12,256).
- C No. 203 Dalgleish, James P., of Barbreck, Lochgilphead, Argyll, "Capleadh Ruadh XVI. of Barbreck" (12,399).
- C No. 207 Nelson, T. E., Achnacloich, Connel, Argyll, "Noinean Og V. of Achnacloich" (12,732).

CLASS 32. HEIFER, born on or after 1st December 1945 and before 1st December 1946.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 210 Brown, William Pearson, Alderley, Easingwold, Yorkshire, "Annag Ruadh of Easingwold" (12,541).
- 2nd No. 215 Morrison, Major John Granville, of Islay, M.P., Bridgend, Islay, "Elid Ruadh V. of Balole" (12,459).
- 3rd No. 217 Trent, Lord, of Ardnamurchan, D.L., J.P., Glenborrodale Castle, Acharacle, Argyll, "Barbara Ruadh of Mingary" (12,855).
- 4th No. 214 Morrison, Major John Granville, of Islay, M.P., Bridgend, Islay, "Capleadh Ile X." (12,490).
- V No. 211 Dalgleish, James P., of Barbreck, Lochgilphead, Argyll, "Annag Ruadh VII. of Barbreck" (12,410).
- H No. 216 Nelson, T. E., Achnacloich, Connel, Argyll, "Dossan Riabhach of Achnacloich" (12,733).

CLASS 33. HEIFER, born on or after 1st December 1946.—
PREMIUMS, £10, £5, £3, and £2.

- 1st No. 224 Walker, William, J.P., of Foreland, Bruichladdich, Isle of Islay, "Laochag Ruadh of Foreland" (12,689).
 2nd No. 219 Morrison, Major John Granville, of Islay, M.P., Bridgend, Islay, "Capleadh Ile XI." (Vol. 28).
 3rd No. 223 Trent, Lord, of Ardnamurchan, D.L., J.P., Glenborrodale Castle, Acharacle, Argyll, "Mairi Ruadh of Mingary" (12,857).
 4th No. 221 Trent, Lord, of Ardnamurchan, D.L., J.P., Glenborrodale Castle, Acharacle, Argyll, "Morag of Mingary" (12,856).
 V No. 222 Trent, Lord, of Ardnamurchan, D.L., J.P., Glenborrodale Castle, Acharacle, Argyll, "Baravalla-og of Mingary" (12,858).

AYRSHIRE.

To be eligible for competition in the Ayrshire Cattle Classes, animals must have an authenticated Milk Yield, or in the case of Younger Females and Bulls (including Heifers which, at date of closing of entries, have been less than 305 days in milk) an authenticated Milking Pedigree, in accordance with the following standards:—

1. Animals entered in Classes 34, 35, and 36 must have produced as a COW at least 8500 lb. of milk of not less than 3·8 per cent butter fat in 305 days, or as a Heifer at least 7000 lb. of milk of not less than 3·8 per cent butter fat in 305 days.
 Heifers entered in Class 35, less than 305 days in milk at closing of entries, must qualify on Milking Pedigree.
2. The dam and dam of sire of animals entered in Classes 37, 38, 39, 40, 41, or 42 must have similar qualifications.

Under the Society's General Regulations an animal of any age that has had a calf is classed as a Cow. In the above Regulations, where reference is made to a Heifer in Milk this means an animal which is in her first lactation.

PRESIDENT'S CHAMPION MEDAL
for best Ayrshire Animal.

No. 240 Beck, Dudley, Darland Hall, Rossett, near Wrexham, "Balig Queen" (47,623).

Reserve—No. 225 Clark, John, & Sons, Dunrod Farm, Inverkip, "Dunrod Daisy White 16th" (81,423).

Edinburgh Corporation Perpetual Gold Challenge Cup, value £225, *for best Ayrshire Animal. "Extra Stock" eligible to compete.* Presented by the City of Edinburgh to commemorate the Society's Hundredth Show.

No. 240 Beck, Dudley, Darland Hall, Rossett, near Wrexham, "Balig Queen" (47,623).

Reserve—No. 225 Clark, John, & Sons, Dunrod Farm, Inverkip, "Dunrod Daisy White 16th" (81,423).

Trent Perpetual Challenge Trophy, value £75, for the best Group of three Animals of the Ayrshire breed, consisting of three females in milk or in calf, bred by Exhibitor. "Extra Stock" eligible to compete. Presented by Messrs Boots Pure Drug Company Ltd.

Nos. 237, 254, 262 Montgomerie, A. W., & Sons, Ltd., Dunduff Farm, Dunure, by Ayr.

Cowhill Champion Cup, approximate value £45, for best Animal of the Ayrshire breed, entered with a number in the Herd-Book. Presented by the late Major Henry Keswick, Cowhill Tower, Dumfries, to the Ayrshire Cattle Herd-Book Society, to be competed for annually at the Shows of the Highland and Agricultural Society of Scotland. Messrs James Howie & Sons, Muirside, Dumfries, who won the Cup outright in 1934, have kindly re-presented the Cup to the Society for competition on the same conditions as formerly.

No. 240 Beck, Dudley, Darland Hall, Rossett, near Wrexham, "Balig Queen" (47,623).

Special Prize of £10 for the best Female Animal of the Ayrshire breed entered with a number in the Ayrshire Cattle Herd-Book prior to 1st June 1948. "Extra Stock" eligible to compete. Given by the Ayrshire Cattle Herd-Book Society.

No. 240 Beck, Dudley, Darland Hall, Rossett, near Wrexham, "Balig Queen" (47,623).

CLASS 34. COW, in Milk, born before 1945.—
PREMIUMS, £15, £10, £5, and £3.

- 1st No. 225 Clark, John, & Sons, Dunrod Farm, Inverkip, "Dunrod Daisy White 16th" (81,423).
- 2nd No. 233 Tough, William, Carbrook Mains, Larbert, Stirlingshire, "Carbrook Zoey 3rd" (88,816).
- 3rd No. 232 Templeton, G. & R., Carnell Home Farm, Hurlford, Kilmarnock, "Carnell Greta" (40,597).

CLASS 35. COW, in Milk, born on or after 1st January 1945.—
PREMIUMS, £15, £10, £5, and £3.

- 1st No. 235 Clark, John, & Sons, Dunrod Farm, Inverkip, "Dunrod Charmaine 13th" (93,923).

CLASS 36. COW of any age, in Calf, and due to calve before 1st December of the year of the Show.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 240 Beck, Dudley, Darland Hall, Rossett, near Wrexham, "Balig Queen" (47,623).
- 2nd No. 231 Richmond, M., & Sons, Knockdon, Maybole, Ayrshire, "Knockdon Glen Luck" (48,892).
- 3rd No. 245 Richmond, M., & Sons, Knockdon, Maybole, Ayrshire, "Knockdon Derby Lady" (80,834).
- 4th No. 246 Tough, William, Carbrook Mains, Larbert, Stirlingshire, "Carbrook White Lena" (97,596).
- C No. 239 H.M. The King, Balmoral Castle, Ballater, "Balmoral Jemima" (32,693).

CLASS 37. HEIFER, born on or after 1st June 1945, in Calf and due to calve before 1st December of the year of the Show.—PREMIUMS, £10, £6, £4, and £2.

- 1st No. 237 Montgomerie, A. W., & Sons, Ltd., Dunduff Farm, Dunure, by Ayr, " Westburn Rosebud 3rd (22,016).
- 2nd No. 254 Montgomerie, A. W., & Sons, Ltd., Lessnessock, Ochiltree, Ayrshire, " Lessnessock Dewdrop 2nd " (21,983).
- 3rd No. 252 M'Alister, R. & J., Mid Ascog, Rothesay, Bute, " Mid Ascog Pearl Stone " (24,178).
- 4th No. 248 Cochrane, Alexander, & Sons, Nether Craig, Kilmarnock, " Nether Craig Brown Betty " (14,970).
- V No. 255 Templeton, G. & R., Carnell Home Farm, Hurlford, Kilmarnock, " Carnell Peg 2nd " (13,302).
- H No. 247 Ardgowan Estates, Ltd., Ardgowan, Inverkip, Renfrewshire, " Ardgowan Waitress " (14,427).
- C No. 236 Clark, John, & Sons, Dunrod Farm, Inverkip, " Dunrod Jean 10th " (13,772).
- C No. 250 Horne, Miss, Lairg House, Lairg, Sutherland, " Dalchork Countess Enid " (21,587).

CLASS 38. HEIFER, born in 1946.—PREMIUMS, £10, £6, £4, and £2.

- 1st No. 262 Montgomerie, A. W., & Sons, Ltd., Lessnessock, Ochiltree, Ayrshire, " Lessnessock Bright Smile 5th " (21,980).
- 2nd No. 256 Chalmers, William, & Son, Summerfield, Dumfries, " Summerfield Apple " (Vol. 71).
- 3rd No. 250 Douglas, Major and Mrs Sholto, Feugh Lodge, Banchory, Kincardineshire, " Tilquhillie Bianca " (28,841).
- 4th No. 260 Horne, Miss, Lairg House, Lairg, Sutherland, " Dalchork Countess Tess " (46,6

CLASS 39. HEIFER, born in 1947.—PREMIUMS, £10, £6, £4, and £2.

- 1st No. 274 Semple, Robert, & Sons, Netherton and Genoch, Ayr, " Genoch Bangle " (Vol. 71).
- 2nd No. 268 Cochrane, Alexander, & Sons, Nether Craig, Kilmarnock, " Nether Craig Chime " (50,574).
- 3rd No. 265 Barr, Allan, Hobsland, Monkton, " Hobsland Peerless 4th " (37,382).
- 4th No. 275 Templeton, John, Willoxton, Mauchline, Ayrshire, " Willoxton Lucy " (53,483).
- V No. 276 Tough, William, Carbrook Mains, Larbert, Stirlingshire, " Carbrook Zoey 9th " (Vol. 71).
- H No. 269 Douglas, Major and Mrs Sholto, Feugh Lodge, Banchory, Kincardineshire, " Tilquhillie Crocus " (47,046).
- C No. 270 Douglas, Major and Mrs Sholto, Feugh Lodge, Banchory, Kincardineshire, " Tilquhillie Cherry " (47,042).
- C No. 271 Horne, Miss, Lairg House, Lairg, Sutherland, " Dalchork Conductress " (46,684).
- C No. 272 Horne, Miss, Lairg House, Lairg, Sutherland, " Dalchork Ladybird " (46,695).

Breeder of best Bull of any age in Classes 40 to 42 ("Extra Stock" not eligible to compete)—The Silver Medal.

No. 287 Wallace, David, Auchenbrain, Mauchline.

Special Prize of £10 for the best Male Animal of the Ayrshire breed entered with a number in the Ayrshire Cattle Herd-Book prior to 1st June 1948. "Extra Stock" eligible to compete. Given by the Ayrshire Cattle Herd-Book Society.

No. 287 Woodburn, Robert, Boreland Farm, Hollybush, Ayr, "Auchenbrain Koniev" (63,781).

CLASS 40. BULL, born before 1946.—PREMIUMS,
£12, £8, £4, and £2.

- 1st No. 287 Woodburn, Robert, Boreland Farm, Hollybush, Ayr, "Auchenbrain Koniev" (63,781).
- 2nd No. 281 Kirkpatrick, A. & A., Barr, Sanquhar, Dumfriesshire, "Howie's Improver" (58,876).
- 3rd No. 286 Templeton, G., Knowe, Auchinleck, Ayrshire, "Hobsland Knight Commander" (51,626).
- 4th No. 282 Montgomerie, A. W., & Sons, Ltd., Lessnessock, Ochiltree, Ayrshire, "Lessnessock History Maker" (55,542).
- V No. 277 Beck, Dudley, Darland Hall, Rossett, near Wrexham, "Lessnessock Certified" (67,056).
- H No. 284 Robertson, Captain Ian S., Linkwood, Elgin, "Changue Jubilee Knight" (69,151).
- C No. 278 Binnie, David A., Middle Barnego, Denny, Stirlingshire, "Ardroscadale Mainstay" (52,852).
- C No. 279 Chalmers, William, & Son, Summerfield, Dumfries, "Howie's Viceroy" (64,149).

CLASS 41. BULL, born in 1946.—PREMIUMS,
£10, £7, £3, and £2.

- 1st No. 291 Templeton, G. & R., Carnell Home Farm, Hurlford, Kilmarnock, "Hobsland Skymaster" (65,020).
- 2nd No. 290 Cochran, Alexander, & Sons, Nether Craig, Kilmarnock, "Low Milton Final Command" (69,231).
- 3rd No. 289 Black, W. B., Holton, Milnathort, Kinross-shire, "Sandhill Old Glory" (Vol. 71).
- 4th No. 288 Barr, Allan, Hobsland, Monkton, "Hobsland Roll of Honour" (65,018).

CLASS 42. BULL, born in 1947.—PREMIUMS,
£8, £5, £3, and £2.

- 1st No. 295 Black, W. B., Holton, Milnathort, Kinross-shire, "Killoch Nutcracker" (Vol. 71).
- 2nd No. 298 Montgomerie, A. W., & Sons, Ltd., Lessnessock, Ochiltree, "Willoxton Lustre" (73,386).
- 3rd No. 300 Woodburn, Alexander, & Sons, Barwheys Farm, Mauchline, "Barwheys Fancy Boy" (Vol. 72).

BRITISH FRIESIAN.

To be eligible for competition in the British Friesian Classes animals must comply with the following standards :—

Cow Classes.—Cows must either be entered in the Register of Merit of the British Friesian Cattle Society or must have achieved a qualifying lactation of at least 1000 gallons of milk at not less than 3·50 per cent butter fat.

Heifer Classes.—Heifers must be out of Dams either entered in the Register of Merit or that have achieved a qualifying lactation of at least 1000 gallons of milk at not less than 3·50 per cent butter fat.

Bull Classes.—The Dam and the Dam of the Sire must either be entered in the Register of Merit or must have achieved a qualifying lactation of at least 1000 gallons of milk at 3·50 per cent butter fat.

PRESIDENT'S CHAMPION MEDAL for best British Friesian Animal.

No. 322 Kilpatrick, James, Craigie Mains, Kilmarnock, " Craigiemains Victoria 29th " (377,568 R.M.P.).

Reserve—No. 340 Whiteford, John M., Southbar, Inchinnan, Renfrewshire, " Parkhouse Hiltkeesjo " (97,981 P.I., R.M.P.).

The J. P. Brown Perpetual Challenge Cup, value £75, for best Animal in the British Friesian Classes, " Extra Stock " eligible to compete. This Cup was presented by Mrs Brown, Dipple, in memory of her husband, the late Mr J. P. Brown, Dipple.

No. 322 Kilpatrick, James, Craigie Mains, Kilmarnock, " Craigiemains Victoria 29th " (377,568 R.M.P.).

Silver Challenge Cup, value £80, for the best Group of three Animals. The Cup to become the property of an Exhibitor winning it three times, not necessarily in succession. " Extra Stock " eligible to compete. Given by the British Friesian Cattle Society.

301, 302, 341 Allan, Thomas D., & Sons, Parkhouse, Biggar.

The George Hobson Silver Challenge Cup, value £50, for the best two Cows of the British Friesian breed, in milk or forward in calf, bred by Exhibitor, each cow having an official lactation of not less than 1000 gallons of milk and 3·50 per cent butter fat in not more than 365 days. Presented by the Scottish Friesian Breeders' Club.

301, 302 Allan, Thomas D., & Sons, Parkhouse, Biggar.

Champion Medal or Spoon given by the British Friesian Cattle Society for the best Female Animal exhibited. " Extra Stock " eligible to compete.

No. 322 Kilpatrick, James, Craigie Mains, Kilmarnock, " Craigiemains Victoria 29th " (377,568 R.M.P.).

CLASS 43. COW, in Milk, born in or before 1944.—
PREMIUMS, £15, £10, £5, and £3.

- 1st No. 301 Allan, Thomas D., & Sons, Parkhouse, Biggar, " Parkhouse Black Bella 4th " (333,392 R.M.).
 2nd No. 305 Logan, James, & Co., Powis Mains, Stirling, " Powis Myrat 4th " (C.S.R. 59,836).
 3rd No. 302 Allan, Thomas D., & Sons, Parkhouse, Biggar, " Parkhouse Queen Maisie 3rd " (360,474 R.M.).
 4th No. 307 Munro, Alistair, Dell of Inshes, Inverness, " Dellness Lena 4th " (323,286 R.M.).

CLASS 44. COW, in Calf, and not in Milk, born in or before 1945.
—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 311 Logan, James, & Co., Powis Mains, Stirling, " Powis Ermine 8th " (334,258 R.M.).
 2nd No. 312 M'Kendrick, Robert E., Cameron, Windygates, Fife, " Craig-ends Quality 2nd " (322,376 R.M.).
 3rd No. 315 Munro, Ian M., Leanach, Culloden Moor, Inverness-shire, " Dell Jane 3rd " (323,258 R.M.).
 4th No. 318 Spence, Andrew, & Son, Commieston, Montrose, " Commies-ton Rolass 3rd " (321,960 R.M.).
 V No. 310 Logan, James, & Co., Powis Mains, Stirling, " Powis Gaylass 4th " (290,746 R.M.).
 H No. 314 Munro, Ian M., Leanach, Culloden Moor, Inverness-shire, " Dell Damson 3rd " (301,358 R.M., R.M.P.).
 C No. 313 Munro, Ian M., Leanach, Culloden Moor, Inverness-shire, " Dell Lola " (252,104 R.M.).

CLASS 45. COW, in Milk, born in 1945 or 1946.—PREMIUMS,
£15, £10, £5, and £3.

- 1st No. 322 Kilpatrick, James, Craigie Mains, Kilmarnock, " Craigie-mains Victoria 29th " (377,568 R.M.P.).
 2nd No. 321 Kilpatrick, James, Craigie Mains, Kilmarnock, " Craigie-mains Peach 4th " (R.M.P.).
 3rd No. 324 Munro, Alistair, Dell of Inshes, Inverness, " Dellness Helen 4th " (378,624).

CLASS 46. HEIFER, born in 1946.—PREMIUMS,
£10, £6, £4, and £2.

- 1st No. 327 M'Kendrick, Robert E., Cameron, Windygates, Fife, " Craig-ends Dalmaris " (Vol. 36).
 2nd No. 326 Brewster, David, Shawhead, Coatbridge, " Dennistoun Aaltje " (Vol. 36 P.I.).
 3rd No. 329 Munro, Ian M., Leanach, Culloden Moor, Inverness-shire, " Dell Lizbeth 7th " (Vol. 36).
 4th No. 330 Shanks, J., & Son, Nutholm, Lockerbie, " Rattrra Val Christina " (Vol. 36).

CLASS 47. HEIFER, born in 1947, before 1st July.—
PREMIUMS, £10, £6, £4, and £2.

- 1st No. 331 M'Kendrick, Robert E., Cameron, Windygates, Fife, " Craig-ends Muriel 16th " (467,988).
 2nd No. 333 Munro, Ian M., Leanach, Culloden Moor, Inverness-shire, " Dell Molly 7th " (100,376 C.S.R.).
 3rd No. 334 Spence, Andrew, & Son, Commieston, Montrose, " Commieston Annie 8th " (452,024).

CLASS 48. HEIFER, born in 1947, on or after 1st July.—
PREMIUMS, £10, £6, £4, and £2.

- 1st No. 336 Mitchell, David, Morridge Hall, St Boswells, " Berwick Popular " (479,178).

Breeder of Best Bull of any age in Classes 49 to 51 (" Extra Stock " not eligible to compete)—The Silver Medal.

No. 340 Allan, J. D., & Sons, Parkhouse, Biggar.

Champion Medal or Spoon given by the British Friesian Cattle Society for *the best Male Animal exhibited. " Extra Stock " eligible to compete.*

No. 340 Whiteford, John M., Southbar, Inchinnan, Renfrewshire, " Parkhouse Hiltkeesjo " (97,981 P.I., R.M.P.).

CLASS 49. BULL, born in or before 1945.—PREMIUMS,
£12, £8, £4, and £2.

- 1st No. 340 Whiteford, John M., Southbar, Inchinnan, Renfrewshire, " Parkhouse Hiltkeesjo " (97,981 P.I., R.M.P.).
 2nd No. 339 Shanks, J. G., Gameraig, Parkgate, Dumfries, " Rattrra Prince Albert " (90,951 R.M.P.).
 3rd No. 337 Bayne, John, Nether Magask, St Andrews, " Standalane Keesbert 17th " (92,349).
 4th No. 338 Munro, Alistair, Dell of Inshes, Inverness, " Dellness (imp. 1946) Monogram Commander " (Vol. 36).

CLASS 50. BULL, born in 1946.—PREMIUMS,
£10, £5, £3, and £2.

- 1st No. 341 Allan, Thomas D., & Sons, Parkhouse, Biggar, " Parkhouse Bram " (126,151 P.I.).
 2nd No. 344 Munro, Ian M., Leanach, Culloden Moor, Inverness-shire, " Lavenham Anstey " (122,657).
 3rd No. 345 Ross, George P. and Mrs Margaret, Kilmaronock House, Drymen, by Alexandria, " Berwick Orderly " (123,939).
 4th No. 343 Mitchell, David, Morridgehall, St Boswells, " Parkhouse Verkees 4th " (122,811).
 V No. 342 MacLennan, D. Douglas, Balmachree, Inverness, " Craigbet Classic " (120,457).

CLASS 51. BULL, born in 1947.—PREMIUMS,
£10, £5, £3, and £2.

- 1st No. 347 Brewster, David, Shawhead, Coatbridge, "Ogilvie Urinza" (129,075 P.I.).
 2nd No. 350 MacRobert Farms (Douneside), Ltd., Lalimli, Tarland, Aberdeenshire, "Dounesido Dicuwkedin 2nd" (129,311 P.I.).
 3rd No. 346 Allan, Thomas D., & Sons, Parkhouse, Biggar, "Creskeld Renske Keejo" (127,217 P.I.).
 4th No. 352 Munro, Ian M., Leanach, Culloden Moor, Inverness-shire, "Dell Dark Knight" (Vol. 38 R.M.P.).
 V No. 354 Spence, Andrew, & Son, Commieston, Montrose, "Commies-ton Leeder Gerard" (129,887 P.I., R.M.P.).
 H No. 348 Dunning-White, Lieut.-Colonel J. M., Torbreck, Inverness, "Commies-ton Tristram 3rd" (Vol. 38).
 C No. 351 Mitchell, David, Morridgehall, St Boswells, "Berwick Promise" (Vol. 38).
 C No. 353 Ross, George P. and Mrs Margaret, Kilmaronock House, Drymen, by Alexandria, "Lomond Marius Supreme" (Vol. 38).

JERSEY.

*PRESIDENT'S CHAMPION MEDAL
for best Jersey Animal.*

- No. 364 Goodbody, W. U., Invergarry House, Invergarry, "Snailwell Aristocrat 4th" (24,750).

Reserve—No. 357 Burton, Baroness, Dochfour, Inverness, "Dochfour Una" (63,319).

Silver Challenge Cup, value £30, for the best Female Animal in the Jersey Cattle Classes. "Extra Stock" eligible to compete. Presented by The Baroness Burton.

- No. 357 Burton, Baroness, Dochfour, Inverness, "Dochfour Una" (63,319).

The Corsar Jersey Perpetual Challenge Cup for the best Bull judged on the merits of three of his registered progeny (one of which may be a Bull) bred by the Exhibitor, exhibited in the Jersey Classes, the sire not to be shown with the Group. Presented by Mr Charles Corsar, Rosely, Arbroath, who will give a replica each year to the winner of the Cup.

Not awarded.

Special Prize of £10 for the best Cow exhibited in the Jersey Classes which has yielded a minimum of 10,000 lb. of milk at not less than 5 per cent butter fat in an officially recorded lactation not exceeding 361 days. (Records to be produced may be either those of the Scottish Milk Records Association, the Milk Marketing Board, or the Royal Jersey Agricultural Society.) Given by Mr W. U. Goodbody, Invergarry House, Invergarry.

Not awarded.

Special Prize of £3, 3s. for the best Cow bred in Scotland exhibited in the Jersey Classes which has yielded not less than 8000 lb. of milk at 4.5 per cent butter fat in an officially recorded lactation not exceeding 365 days. Given by Mrs P. M. Badenach Nicolson, Glenbervie House, Drumlithie.

No. 356 Forbes-Leith, Sir Robert Ian Algernon, Bt., Fyvie Castle, Aberdeenshire, "Fyvie Tunisia" (55,355).

Champion Prize of £5 given by the English Jersey Cattle Society for the best Female Animal exhibited. "Extra Stock" eligible to compete.

No. 357 Burton, Baroness, Dochfour, Inverness, "Dochfour Una" (63,319).

CLASS 52. COW, in Milk, born before 1st June 1944.—
PREMIUMS, £10, £5, and £3.

1st No. 356 Forbes-Leith, Sir Robert Ian Algernon, Bt., Fyvie Castle, Aberdeenshire, "Fyvie Tunisia" (55,355).

CLASS 53. COW, in Milk, born on or after 1st June 1944 and before 1st June 1945.—PREMIUMS, £10, £5, and £3.

No entry.

CLASS 54. COW, in Milk, born on or after 1st June 1945.—
PREMIUMS, £10, £5, and £3.

1st No. 357 Burton, Baroness, Dochfour, Inverness, "Dochfour Una" (63,319).

2nd No. 358 Forbes-Leith, Sir Robert Ian Algernon, Bt., Fyvie Castle, Aberdeenshire, "Fyvie Rosalino" (63,781).

3rd No. 362 Stackelberg, Baron N., Erchless Castle, Beaulieu, "Brookhall Rosel's Design" (75,704).

V No. 363 Stackelberg, Baron N., Erchless Castle, Beaulieu, "Pebmarsh Queen" (68,701).

Silver Challenge Cup, value £25, for the best Bull in the Jersey Cattle Classes. "Extra Stock" eligible to compete. Presented by Lady Lovat.

No. 364 Goodbody, W. U., Invergarry House, Invergarry, "Snailwell Aristocrat 4th" (24,750).

Champion Prize of £5 given by the English Jersey Cattle Society for the best Male Animal exhibited. "Extra Stock" eligible to compete.

No. 364 Goodbody, W. U., Invergarry House, Invergarry, "Snailwell Aristocrat 4th" (24,750).

Breeder of the Best Bull in Class 55 ("Extra Stock" not eligible to compete)—The Silver Medal.

No. 364 Webb, H. L., Snailwell, Newmarket.

CLASS 55. BULL, any age.—PREMIUMS,
 £10, £5, and £3.

- 1st No. 364 Goodbody, W. U., Invergarry House, Invergarry, " Snailwell Aristocrat 4th " (24,750).
 2nd No. 366 Stackelberg, Baron N., Erchless Castle, Beauly, " Fyvie Tobruk " (26,552).

HILL CATTLE.

Non-Pedigree Commercial Cattle of the Highland and Galloway Breeds, and also crosses of the beef Breeds.

Animals must have been entered from farms which are actually drawing, or are eligible to draw, the 1947-48 Hill Cattle subsidy. The animals must have been reared in the open.

Class Premiums donated by The Lord Lovat, D.S.O., M.C.

Special Prize of £10 *for the best pen in either Class*, donated by The Lord Lovat, D.S.O., M.C. *Particular emphasis to be placed on hardiness, early maturity and beef characteristics, and also ability to raise a calf.*

- No. 371 Mundell, George, Ladystone, Bunchrew, Inverness-shire (Galloway × Shorthorn).

CLASS 56. COWS, any age, with Calf at foot, pen of three plus followers.—PREMIUMS, £30, £10, and £5.

- 1st No. 371 Mundell, George, Ladystone, Bunchrew, Inverness-shire (Galloway × Shorthorn).
 2nd No. 370 Lovat, Lord, D.S.O., M.C., Beaufort Castle, Beauly (Shorthorn × Hereford).

CLASS 57. HEIFERS, 2 years old, running with Bull but not served before 1st June 1948, pen of three animals.—PREMIUMS, £30, £10, and £5.

- 1st No. 372 Lovat, Lord, D.S.O., M.C., Beaufort Castle, Beauly (Shorthorn × Hereford).
 2nd No. 373 North British Aluminium Co., Ltd. (Corryarrick Fold), Inverloch Village, Fort William (Highland × Shorthorn).

HORSES.

CLYDESDALE STALLION AND COLT.

PRESIDENT'S CHAMPION MEDAL for best Clydesdale Stallion or Colt.

No. 376 Campbell, G. & J., Gartness Farm, Balfron, "Gartness Utility" (24,280).

Reserve—No. 386 Clark, Thomas, & Son, Muirtons, Perth, "Regal Monarch" (24,474).

Paisley Perpetual Gold Challenge Cup, value £900, *for best Clydesdale Stallion or Colt, "Extra Stock" eligible to compete.* This Cup, along with an endowment of £600, was provided from money collected in Paisley by the late Provost Muir M'Kean, and is in commemoration of the Society's first Show at Paisley in 1913.

No. 376 Campbell, G. & J., Gartness Farm, Balfron, "Gartness Utility" (24,280).

Reserve—No. 386 Clark, Thomas, & Son, Muirtons, Perth, "Regal Monarch" (24,474).

The James Kilpatrick Perpetual Challenge Cup *for best Clydesdale Stallion or Colt registered in the Clydesdale Stud Book, "Extra Stock" eligible to compete.* Presented by Mr James Kilpatrick, Craigie Mains.

No. 376 Campbell, G. & J., Gartness Farm, Balfron, "Gartness Utility" (24,280).

Breeder of best Male Animal of any age in Classes 58 to 60 ("Extra Stock" not eligible to compete)—The Silver Medal.

No. 376 More, John, & Sons, The Beild, Gargunnoch.

CLASS 58. STALLION or ENTIRE COLT, born in or before 1945. —PREMIUMS, £20, £15, £10, and £4.

1st No. 376 Campbell, G. & J., Gartness Farm, Balfron, "Gartness Utility" (24,280).

2nd No. 384 Sommerville, James A., Smeaton Farm, Dalkeith, "Smeaton Ideal" (23,919).

3rd No. 375 Cameron, Robert, Netherwood, Kilmacolm, "Netherwood" (24,413).

4th No. 383 M'Gregor, Hugh, Ballinton, Thornhill, Stirling, "Re-Union" (23,689).

V No. 385 Templeton, M., Charterhouse, Kelso, "Royal Charter" (24,315).

H No. 374 Adams, David, Auchencraig, Dumbarton, "Adonis" (24,083).

C No. 382 M'Farlane, Alexander, Salchrie Farm, Kirkcolm, Stranraer, "Salchrie Stalin" (24,319).

William Taylor Memorial Prize of £10 and Certificate *to the Breeder of the best Clydesdale Colt entered in Classes 59 and 60.* Given by William Taylor Memorial Committee.

No. 386 M'Quistin, J. N. & T., Balneil, New Luce, Stranraer.

CLASS 59. ENTIRE COLT, born in 1946.—PREMIUMS,
£20, £15, £10, and £4.

- 1st No. 386 Clark, Thomas, & Son, Muirtons, Perth, "Regal Monarch" (24,474).
 2nd No. 391 Sommerville, James A., Smeaton Farm, Dalkeith, "Smeaton Topsman" (24,480).
 3rd No. 389 Murray, Douglas D., The Dene, Seaham Harbour, "Seaham Golden Glory" (Vol. 71).
 4th No. 392 Templeton, M., Charterhouse, Kelso, "Arcadian" (Vol. 71).
 V No. 390 Park, Misses M. & J., Brunstane, Portobello, "Brunstane Miller" (Vol. 71).

CLASS 60. ENTIRE COLT, born in 1947.—PREMIUMS,
£15, £9, £6, and £4.

- 1st No. 394 Clark, Thomas, & Son, Muirtons, Perth, "Rising Monarch."
 2nd No. 393 Cameron, Robert, Netherwood, Kilmacolm, "Pride of Netherwood."
 3rd No. 397 M'Farlane, Alexander, Salchrie Farm, Kirkcolum, Stranraer, "Salchrie Prince Philip."
 4th No. 396 Johnston, James, Dunmore Home Farm, Falkirk, "Dunmore Superlative."
 V No. 398 Morris, J. W., & Son, Balquharren, Bankfoot.
 H No. 395 Filshie, James D., Dumbuck, Bowling, Dumbartonshire, "Prince Consort."

CLYDESDALE GELDING.

Got by a Registered Clydesdale Stallion.

PRESIDENT'S CHAMPION MEDAL
for best Clydesdale Gelding.

No. 405 Bryce, William B., Cambusdrennie, by Stirling, "Clyde."

Reserve—No. 413 Hendrie, Gavin, Tower, Sanquhar, Dumfriesshire, "Caledonia."

The James Clark Silver Challenge Cup, value £80, *for best Clydesdale Gelding, "Extra Stock" eligible to compete.* Given by Mr James Clark, Windlaw Farm, Carmunnock.

No. 405 Bryce, William B., Cambusdrennie, by Stirling, "Clyde."

CLASS 61. GELDING, born before 1945.—PREMIUMS,
£15, £9, £6, and £4.

- 1st No. 405 Bryce, William B., Cambusdrennie, by Stirling, "Clyde."
 2nd No. 407 Holliday, Irving, Clifton Hall, Penrith, Cumberland,
 "Roger."
 3rd No. 402 Adamson, James R., Bruckley, Dairsie, Fife, "M'Gregor."
 4th No. 404 Bryce, William B., Cambusdrennie, by Stirling, "Sir John."
 V No. 406 Holliday, Irving, Clifton Hall, Penrith, Cumberland,
 "Douglas."
 H No. 408 Northern Co-operative Society, Ltd., Millbank, Berryden
 Road, Aberdeen, "Jamie."

CLASS 62. GELDING, born in 1945.—PREMIUMS,
£15, £9, £6, and £4.

- 1st No. 413 Hendrie, Gavin, Tower, Sanquhar, Dumfriesshire, "Caledonia."
 2nd No. 415 Northern Co-operative Society Ltd., Millbank, Berryden
 Road, Aberdeen, "Print."
 3rd No. 417 Templeton, M., Charterhouse, Kelso.
 4th No. 414 Moncrieff, John, Straiton, Leuchars, Fife, "Punch."

CLASS 63. GELDING, born in 1946. —PREMIUMS,
£15, £9, £6, and £4.

None forward.

CLYDESDALE MARE AND FILLY.

PRESIDENT'S CHAMPION MEDAL
for best Clydesdale Mare or Filly.

- No. 444 Sommerville, Andrew, Wester Cowden, Dalkeith, "Cowden Primula."

Reserve—No. 431 Young, J. W., & Son, West Doura, Kilwinning, Ayrshire,
 "Doura Bonnie Jean" (71,472).

Cawdor Challenge Cup for best Clydesdale Mare or Filly, registered in the
 Clydesdale Stud-Book, "Extra Stock" eligible to compete. This Cup is
 offered by the Clydesdale Horse Society of Great Britain and Ireland.

- No. 444 Sommerville, Andrew, Wester Cowden, Dalkeith, "Cowden Primula."

Reserve—No. 431 Young, J. W., & Son, West Doura, Kilwinning, Ayrshire,
 "Doura Bonnie Jean" (71,472).

CLASS 64. MARE, of any age, with Foal at foot, or due to foal before 31st July 1948.—PREMIUMS, £20, £12, £7, and £4.

- 1st No. 427 Young, Robert G., Arradoul Mains, Buckie, Banffshire, "Arradoul Belle Ideal" (68,880).
 2nd No. 421 Beaton, James & Frank, Mains of Glack, Pitcaple, Aberdeenshire, "Glack Patricia" (67,984).
 3rd No. 425 Thomson, W. I., Burnside of Tynet, Clochan, Banffshire, "Whitehaugh Lady May" (71,443).
 4th No. 426 Young, Robert G., Arradoul Mains, Buckie, Banffshire, "Arradoul Deanna" (69,878).
 V No. 424 Smith, David Sands, Falleninch Farm, Stirling, "Knockie-mill Thisesette."

CLASS 65. YELD MARE, born before 1945.—PREMIUMS, £15, £9, £6, and £4.

- 1st No. 431 Young, J. W., & Son, West Doura, Kilwinning, Ayrshire, "Doura Bonnie Jean" (71,472).
 2nd No. 430 Sommerville, Andrew, Wester Cowden, Dalkeith, "Cowden Rosebud."
 3rd No. 428 Chapman, A. S., Creagh-Mhor, Kippen, Stirling, "Nemesia."
 4th No. 429 Milne, J., & Sons, Upper Affloch, Aberdeenshire, "Affloch Maid of Honour" (70,409).

CLASS 66. YELD MARE or FILLY, born in 1945.—PREMIUMS, £15, £9, £6, and £4.

- 1st No. 434 Dobie, William, Garrion Haugh Farm, Wishaw, "Leading Lady."
 2nd No. 438 Young, J. W., & Son, West Doura, Kilwinning, Ayrshire, "Doura Lady Alice."
 3rd No. 436 Sinclair, H. M., Orlrig House, Castletown, Thurso, "Slodahill Princess."
 4th No. 437 Thomson, W. I., Burnside of Tynet, Clochan, Banffshire, "Burnside Maureen."
 V No. 433 Beaton, James & Frank, Mains of Glack, Pitcaple, Aberdeenshire, "Glack Lena."

CLASS 67. FILLY, born in 1946.—PREMIUMS, £15, £9, £6, and £4.

- 1st No. 444 Sommerville, Andrew, Wester Cowden, Dalkeith, "Cowden Primula."
 2nd No. 443 Smith, David Sands, Falleninch Farm, Stirling, "Falleninch Valetta."
 3rd No. 442 Johnston, James, Dunmore Home Farm, Falkirk, "Dunmore Sandra."
 4th No. 439 Chapman, A. S., Creagh-Mohr, Kippen, Stirling, "Mhorine."
 V No. 440 Innes, Alexander Shepherd, Milton of Moyness, Auldearn.
 H No. 441 James, Donald Forbes, Netherton Farm, Forres, Morayshire, "Queen of Netherton."

CLASS 68. FILLY, born in 1947.—PREMIUMS,
£15, £9, £6, and £4.

- 1st No. 451 M'Farlane, John, Bailiellands, Auchterarder, Perthshire,
"Gleneagles Hilda."
2nd No. 453 M'Gregor, Hugh, Ballinton, Thornhill, Stirling, "Lady
Dene."
3rd No. 450 Gunn, P. O., Sibster Mains, Wick, Caithness, "Sibster
Eunice."
4th No. 456 Park, Misses M. & J., Brunstane, Portobello, "Brunstane
Moss Rose."
V No. 454 Miller, William John, Wathegar, Wick, Caithness, "Smiling
Morn."

HUNTERS.

*PRESIDENT'S CHAMPION MEDAL
for best Hunter (Classes 69 to 74).*

- No. 469 Dalrymple, John L., The White House, Balcombe, Sussex,
Gelding, "Darrington."

Reserve—No. 475 Cox, Mrs M. M., Strowan, Crieff, Perthshire, Gelding,
"Dennis."

Dumfries Centenary Silver Challenge Cup, value £150, *for best Hunter.*
"Extra Stock" *not eligible to compete.* Presented by members of the
Dumfriesshire Hunt in 1930 to commemorate the centenary of the
Highland Society's first Show at Dumfries in 1830.

- No. 469 Dalrymple, John L., The White House, Balcombe, Sussex,
Gelding, "Darrington."

The Manderston Perpetual Silver Challenge Cup, value £250, *for best
Hunter in the Breeding Classes.* "Extra Stock" *eligible to compete.*
Presented by Major C. W. H. Bailie, Manderston, Duns.

- No. 460 Currie, Miss E. Thomson, Clatto, Cupar, Fife, "Merry Ann"
(7938).

CLASS 69. HUNTER BROOD MARE, with Foal at foot, or due
to foal before 31st July 1948.—PREMIUMS, £15, £7, and £3.

- 1st No. 460 Currie, Miss E. Thomson, Clatto, Cupar, Fife, "Merry Ann"
(7938).

*Best Hunter Filly, entered in Classes 70 to 72, registered with a number in the Hunter Stud-Book, or the entry tendered within one month of the award—*Champion Silver Medal. Given by the Hunters' Improvement and National Light Horse Breeding Society.

No. 463 Ewing, Major Ian, Mounthooly, Jedburgh, Filly, "Pin Box."

Reserve—No. 465 Collins, Lieut.-Colonel I. G., Crossburn, Troon, Filly, "Gaelic Song."

CLASS 70. YELD MARE, FILLY, or GELDING, born in 1945—*in hand*.—PREMIUMS, £10, £5, and £3.

1st No. 462 Ewing, Major Ian, Mounthooly, Jedburgh, Gelding, "Rolling Pin."

2nd No. 461 Duguid, Lieut.-Colonel T. C., Belhelvie Lodge, Balmedie, Aberdeenshire, Mare, "Tartar."

CLASS 71. YELD MARE, FILLY, or GELDING, born in 1946—*in hand*.—PREMIUMS, £10, £5, and £3.

1st No. 463 Ewing, Major Ian, Mounthooly, Jedburgh, Filly, "Pin Box."

CLASS 72. FILLY, COLT, or GELDING, born in 1947—*in hand*.—PREMIUMS, £10, £5, and £3.

1st No. 465 Collins, Lieut.-Colonel I. G., Crossburn, Troon, Filly, "Gaelic Song."

2nd No. 466 Rogerson, George, Roxburgh Mains, Roxburgh, Filly, "Hame's Heart."

3rd No. 467 Stoddart, Miss Ruth, Aryburn, Dyce, Aberdeenshire, Colt.

CLASS 73. MARE or GELDING, any age, to carry 14 stone and over—*in saddle*.—PREMIUMS, £15, £10, and £5.

1st No. 469 Dalrymple, John L., The White House, Balcombe, Sussex, Gelding, "Darrington."

2nd No. 468 Clark, Ian, Brookland, Lanark, Gelding, "Roderick Dhu."

3rd No. 470 Hodge, Niall D., Bankhead Farm, Coatbridge, Lanarkshire, Mare, "Bankhead Happy Return."

V No. 471 Hodge, Niall D., Bankhead Farm, Coatbridge, Lanarkshire, Gelding, "Bankhead Amber."

CLASS 74. MARE or GELDING, any age, to carry under 14 stone—*in saddle*.—PREMIUMS, £15, £10, and £5.

1st No. 475 Cox, Mrs M. M., Strowan, Crieff, Perthshire, Gelding, "Dennis."

2nd No. 479 Johnston, Mrs Alec, Cathlaw, Bathgate, West Lothian, Gelding, "Ismailian."

3rd No. 474 Brown, Craig, Bonnytown, Linlithgow, Gelding, "Clarion Call II."

V No. 481 Morrison-Low, Sir Walter, Bt., Kilmaron Castle, Cupar, Fife, Mare, "Woodquest."

H No. 472 Baillie, Miss Judith, Ballindarroch, Inverness, Mare, "Corral 2nd."

C No. 482 Saloschin, Victor, Gordonstoun, Elgin, Gelding, "Caracalla."

CLASS 75. HACK of HUNTER TYPE, any age, not exceeding 15.2 hands—in saddle.—PREMIUMS, £10, £5, and £3.

- 1st No. 494 Smith, Miss Anne E. Graham, 13 Queen's Road, Aberdeen, Gelding, "Powder Blue."
 2nd No. 485 Gordonstoun School, Elgin, Mare, "Micheline."
 3rd No. 489 Inglis, Lady Sylvia, Alltan Donn, Nairn, Mare, "Golden Dawn."
 V No. 488 Inglis, Lady Sylvia, Alltan Donn, Nairn, Mare, "Venture."
 H No. 491 Mackenzie, Miss Margaret, Druim, Inverness, Mare, "Hazel-bridge."
 C No. 495 Stuart, Lady Hermione, Darnaway Castle, Forres, Moray, Gelding, "Raschid."

RIDING PONIES.

CLASS 76. MARE or GELDING, any age, over 13.2 hands and not exceeding 14.2 hands—in saddle.—PREMIUMS, £5, £3, and £2.

- 1st No. 498 Lochore, Mrs, Burgie Mains House, Forres, Morayshire, Mare, "Connemara."
 2nd No. 502 Stewart, Miss G. M. L., Arndean, Dollar, Clackmannanshire, Mare, "Twinkle."
 3rd No. 497 Grant, Miss Fiona, Coulmore Cottage, North Kessock, Inverness, Mare, "Furog."
 V No. 500 Salvesen, Mrs, Teaninich, Alness, Ross-shire, Gelding, "Lindsay."
 H No. 499 Middleton, Mrs A. A., Rosefarm, Cromarty, Ross-shire, Gelding, "Fiagon."
 C No. 501 Stevenson, Miss H. Stuart, Tigh-nan-Dilleachdah, Ardeonaig, by Killin, Mare, "Lemon Soda."

CLASS 77. MARE or GELDING, any age, over 12 hands and not exceeding 13.2 hands—in saddle—to be ridden by boy or girl not exceeding 14 years of age.—PREMIUMS, £5, £3, and £2.

- 1st No. 506 Hayward, Mrs Paul, West Colinton House, Colinton, Edinburgh 13, Mare, "Wildthyme."
 2nd No. 508 Wester Elchies School, Craigellachie, Strathspey, Gelding, "Philip."
 3rd No. 504 Delap, Miss V. C., Wester Elchies, Craigellachie, Mare, "Certainty."
 V No. 507 Salvesen, Mrs Maude H., Teaninich, Alness, Ross-shire, Mare, "Flutterbye."
 H No. 503 Campbell, Miss Felicity, Gordonstoun, Elgin, Mare, "Merry-legs."

CLASS 78. MARE or GELDING, any age, not exceeding 12 hands—in saddle—to be ridden by boy or girl not exceeding 12 years of age.—PREMIUMS, £5, £3, and £2.

- 1st No. 512 Warre, Master Jonathan, Dalcross Castle, Croy, Inverness-shire, Gelding, "Mason."
 2nd No. 511 Warre, Master Angus, Dalcross Castle, Croy, Inverness-shire, Gelding, "Fortnum."
 3rd No. 510 Munro, Alistair, Dell of Inshes, Inverness, Gelding, "Toby."
 V No. 509 Delap, Miss Amanda, Wester Elchies, Craigellachie, Strathspey, Mare, "Mair."

HILL PONIES.

Perpetual Silver Challenge Cup, value £38, for the best Hill Pony of riding type shown in Class 79. "*Extra Stock*" eligible to compete. Presented by the late Colonel Sir Henry R. Fairfax-Lucy, Bt., C.B., and Lady Fairfax-Lucy, Maxton, St Boswells.

No. 519 Mackenzie, Lieut.-Colonel D. W. A. D., C.V.O., D.S.O., House of Farr, Inverness, Highland Gelding, "Sgianach Glas."

CLASS 79. HILL PONY (HIGHLAND, FELL or DALES), any age, to be shown in saddle.—PREMIUMS, £8, £5, £3, and £2.

1st No. 519 Mackenzie, Lieut.-Colonel D. W. A. D., C.V.O., D.S.O., House of Farr, Inverness, Highland Gelding, "Sgianach Glas."

2nd No. 516 Day, Miss Lavinia, East Wing, Culloden House, Inverness, Highland Gelding, "Archie."

3rd No. 521 Mundell, George, Tarradale, Muir-of-Ord, Ross-shire, Highland Mare, "Heather of Tarradale."

4th No. 520 Mackenzie, Lieut.-Colonel D. W. A. D., C.V.O., D.S.O., House of Farr, Inverness, Highland Mare, "Bridgid of Farr" (7941).

H No. 518 Ellice, Mrs R., Aberchalder, Invergarry, Inverness-shire, Highland Gelding, "Rory."

C No. 527 Warre, Major J. A., M.C., Dalcross Castle, Croy, Gollanfield, Inverness-shire, Highland Mare, "Stella of Dalcross" (8739).

HIGHLAND AND WESTERN ISLAND PONIES.

PRESIDENT'S CHAMPION MEDAL
for best Highland or Western Island Pony.

No. 531 Department of Agriculture for Scotland, 45 Manor Place, Edinburgh 3, "Glenalmond" (2395).

Reserve—No. 552 Cameron, Mrs J. A., Glenfinlas, Callander, Mare, "Ledi Betty" (7158).

Kinmonth Perpetual Gold Challenge Quaich, value £150, for best Highland or Western Island Pony. This Quaich—along with a sum of money to provide a miniature replica in silver annually—was presented by Mrs Moncrieff Wright, Kinmonth, Bridge-of-Earn, in memory of her husband, the late John Moncrieff Wright of Kinmonth.

No. 531 Department of Agriculture for Scotland, 45 Manor Place, Edinburgh 3, "Glenalmond" (2395).

Dundee Citizens' Perpetual Silver Challenge Cup, value about £75, for the best Highland or Western Island Pony. "Extra Stock" eligible to compete. This Cup was presented by the Citizens of Dundee to commemorate the holding of the Society's Annual Show at Dundee in 1933.

No. 531 Department of Agriculture for Scotland, 45 Manor Place, Edinburgh 3, "Glenalmond" (2395).

Special Prizes of £20, £10, and £5 given by Highland Pony Society for Male animals not exceeding 14.2 hands in Classes 80 and 81. Competition to be strictly confined to animals passed sound and free from hereditary disease. The animals winning these prizes must be entered or accepted for entry in the Highland Section of the National Pony Stud-Book.

- 1st No. 531 Department of Agriculture for Scotland, 45 Manor Place, Edinburgh 3, "Glenalmond" (2395).
- 2nd No. 535 Sharp, Miss E. C., Laithers House, Turriff, "Sean of Dalnaglar" (2744).
- 3rd No. 534 Wooley, Thomas, Tulloch, Bonar Bridge, Sutherland, "Loch Assynt."

CLASS 80. STALLION, born before 1946, not exceeding 14.2 hands.
—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 531 Department of Agriculture for Scotland, 45 Manor Place, Edinburgh 3, "Glenalmond" (2395).
- 2nd No. 534 Wooley, Thomas, Tulloch, Bonar Bridge, Sutherland, "Loch Assynt."
- 3rd No. 532 Macfarlane, Lieut.-Colonel J., M.C., Grahamshill House, Airdrie, "Glen Mhairc" (2429).
- 4th No. 530 Campbell, Colin, Shiel, Glenshiel, Ross-shire, "Glenshiel Chieftain" (2637).
- C No. 533 Warre, Major J. A., M.C., Dalcross Castle, Croy, Gollanfield, Inverness-shire, "Peter II." (2424).

CLASS 81. ENTIRE COLT, born on or after 1st January 1946, not exceeding 14.2 hands.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 535 Sharp, Miss E. C., Laithers House, Turriff, "Sean of Dalnaglar" (2744).
- 2nd No. 537 Wooley, Thomas, Tulloch, Bonar Bridge, Sutherland, "Benbecula."
- 3rd No. 536 Warre, Major J. A., M.C., Dalcross Castle, Croy, Gollanfield, Inverness-shire, "Rinnes" (2620).

Special Prizes of £12, £8, and £5 given by Highland Pony Society for Female animals not exceeding 14.2 hands entered in Classes 82, 83, and 84. Competition to be strictly confined to animals passed sound and free from hereditary disease. The animals winning these prizes must be entered or accepted for entry in the Highland Section of the National Pony Stud-Book.

- 1st No. 552 Cameron, Mrs J. A., Glenfinlas, Callander, Mare, "Ledi Betty" (7158).
- 2nd No. 558 Honeyman, Mrs, Derculich, Strathtay, Perthshire, Mare, "Bessie of Kinmonth" (7795).
- 3rd No. 546 Macfarlane, Lieut.-Colonel J., M.C., Grahamshill House, Airdrie, "Grahamshill Fair Maid" (7763).

CLASS 82. MARE, any age, not exceeding 14.2 hands, with Foal at foot, or due to foal before 31st July 1948.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 546 Macfarlane, Lieut.-Colonel J., M.C., Grahamshill House, Airdrie, "Grahamshill Fair Maid" (7763).
 2nd No. 539 Campbell-Blair, Mrs Edith, Dalchenna Home Farm, Inveraray, Argyll, "Matitana of Derculich" (7562).
 3rd No. 545 Honeyman, Mrs, Derculich, Strathtay, Perthshire, "Moir of Derculich" (7906).
 4th No. 547 Warren, Mrs H. P., and Miss Rosemary Hare, New Park, Maplehurst, near Horsham, Sussex, "Newhall Lela" (8072).
 V No. 538 Bethell, Mrs V. M., Sunnyside, Ardmeallie, Huntly, "Lady Gaye" (8210).
 H No. 540 Chrystal, Ian P., Glenbancher, Newtonmore, Inverness-shire, "Morag of Glenshiel" (8448).
 C No. 541 Chrystal, Ian P., Glenbancher, Newtonmore, Inverness-shire, "Polly 2nd of Dalcross" (8495).

CLASS 83. YELD MARE or FILLY, born before 1946, not exceeding 14.2 hands.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 552 Cameron, Mrs J. A., Glenfinlas, Callander, Mare, "Ledi Betty" (7158).
 2nd No. 558 Honeyman, Mrs, Derculich, Strathtay, Perthshire, Mare, "Bessie of Kinmonth" (7795).
 3rd No. 550 Cairns, James, The Biggs, Blackford, Perthshire, Mare, "Calliach Bhan IX."
 4th No. 560 Mackay, J., Upper Smerlie, Lybster, Caithness, Mare, "Sheilagh" (8677).
 V No. 559 Mackay, J., Upper Smerlie, Lybster, Caithness, Mare, "Lily" (8220).
 H No. 542 de Beaumont, Miss, Shalbourne Manor, Marlborough, Wilts., "Charmian of Skene" (7969).
 C No. 553 Campbell, Colin, Glenshiel, Ross-shire, Mare, "Pride of Glenshiel."

CLASS 84. FILLY, born on or after 1st January 1946, not exceeding 14.2 hands.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 569 Honeyman, Mrs, Derculich, Strathtay, Perthshire, "Susan of Derculich."
 2nd No. 568 Honeyman, Mrs, Derculich, Strathtay, Perthshire, "Maggie of Derculich."
 3rd No. 571 Mundell, George, Tarradale, Muir-of-Ord, Ross-shire, "Sido of Tarradale" (8752).
 4th No. 570 Melles, Major W. E., Dochfour, Inverness, "Glenshiel Mairi" (8497).
 V No. 566 Chrystal, Ian P., Glenbancher, Newtonmore, Inverness-shire, "Fiona of Glenbancher."
 H No. 567 Chrystal, Ian P., Glenbancher, Newtonmore, Inverness-shire.

SHETLAND PONIES.

(ALL SHOWN IN HAND.)

PRESIDENT'S CHAMPION MEDAL for best Shetland Pony.

No. 574 Kerr, J. E., C.B.E., of Harviestoun, Dollar, "Harviestoun Beachdair."

Reserve—No. 582 Kerr, J. E., C.B.E., of Harviestoun, Dollar, "Harviestoun Beta" (4825).

Perpetual Silver Challenge Cup, value £75, for best Group of Shetland Ponies drawn from the ordinary Classes, consisting of one male and two females. "Extra Stock" eligible to compete. Presented by a few members of the Shetland Pony Stud-Book Society.

Nos. 574, 582, 593 Kerr, J. E., C.B.E., of Harviestoun, Dollar.

CLASS 85. STALLION, not exceeding 10½ hands, born before 1945. —PREMIUMS, £8, £5, £3, and £2.

- 1st No. 574 Kerr, J. E., C.B.E., of Harviestoun, Dollar, "Harviestoun Beachdair."
- 2nd No. 575 Ritchie, Miss A. R., Netherley House, Stonehaven, "Harviestoun Pippin" (1417).
- 3rd No. 573 Kerr, J. E., C.B.E., of Harviestoun, Dollar, "Balgair" (1403).
- 4th No. 572 Bethune, William, St Elmo, Peat Inn, Cupar, "Beaunemo" (1382).

CLASS 86. ENTIRE COLT, not exceeding 10½ hands, born in 1945 or 1946.—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 577 Kerr, J. E., C.B.E., of Harviestoun, Dollar, "Harviestoun Brian."
- 2nd No. 580 Sleigh, Harry P., St John's Wells, Fyvie, "Wells Monarch."
- 3rd No. 576 Cox, Mrs Maurice, Barncrosh, Castle-Douglas, Kirkcudbrightshire, "Sprig of Marshwood."

CLASS 87. MARE, not exceeding 10½ hands, with Foal at foot, or due to foal before 31st July 1948.—PREMIUMS, £8, £5, £3, and £2.

- 1st No. 582 Kerr, J. E., C.B.E., of Harviestoun, Dollar, "Harviestoun Beta" (4825).
- 2nd No. 583 Kerr, J. E., C.B.E., of Harviestoun, Dollar, "Harviestoun Becky" (4891).
- 3rd No. 581 Cox, Mrs Maurice, Barncrosh, Castle-Douglas, Kirkcudbrightshire, "Jessamine of Marshwood" (4845).
- 4th No. 585 Ritchie, Miss A. R., Netherley House, Stonehaven, "Avalon of Netherley."
- H No. 586 Smith, John, Berry Farm, Scalloway, Shetland, "Wendy of Shalloch."

CLASS 88. YELD MARE, not exceeding 10½ hands.—**PREMIUMS**,
£8, £5, £3, and £2.

- 1st No. 590 Sleigh, Harry P., St John's Wells, Fyvie, "Wells Fairy"
(818) I.S.
2nd No. 589 Ritchie, Miss A. R., Netherley House, Stonehaven, "Elegance
of Netherley" (4896).
3rd No. 587 Lewis, Mrs G. E., Moredun Lodge, Milltimber, Aberdeenshire,
"Moredun Princess."
4th No. 588 Macrae, Mrs K. A., Clunes Mains, Kirkhill, Inverness-shire,
"Jean."

CLASS 89. FILLY, not exceeding 10½ hands, born in 1945 or 1946.
—**PREMIUMS**, £8, £5, £3, and £2.

- 1st No. 593 Kerr, J. E., C.B.E., of Harviestoun, Dollar, "Harviestoun
Beda."
2nd No. 594 Kerr, J. E., C.B.E., of Harviestoun, Dollar, "Harviestoun
Susan."
3rd No. 592 Cox, Mrs Maurice, Barncrosh, Castle-Douglas, Kirkcudbright-
shire, "Baroness of Marshwood."
4th No. 595 Ritchie, Miss A. R., Netherley House, Stonehaven, "Black
Diamond of Netherley."
V No. 591 Cox, Mrs Maurice, Barncrosh, Castle-Douglas, Kirkcudbright-
shire, "Kirkbride Cherry."

JUMPING COMPETITIONS.

North of Scotland Championship Challenge Cup. Presented by the British Show Jumping Association.

Snodgrass, Mrs A. J., Kippilaw, Dalkeith, Mare, "Swallow."

CLASS 1. OPEN JUMPING COMPETITION.—

PREMIUMS, £30, £20, £15, £10, and £5.

- 1st Snodgrass, Mrs A. J., Kippilaw, Dalkeith, Gelding, "Blue Sky."
- 2nd Dawson, J. D., 180 Riverford Road, Newlands, Glasgow, Gelding, "Black Beauty."
- 3rd Chambers, Miss Irene, Thornton Hall, Lanarkshire, "Sea Nymph."
- 4th Snodgrass, Mrs A. J., Kippilaw, Dalkeith, Mare, "Swallow."
- 5th Barrie, Jack, Whiteshaw House, Strathaven, "Clever Girl."

CLASS 2. NORTH OF SCOTLAND CHAMPIONSHIP JUMPING COMPETITION. Only registered Horses or Ponies, the property of members of the British Show Jumping Association who have paid their subscriptions for 1948, may be entered for this Competition.—PREMIUMS, £30, £20, £15, £10, and £5.

- 1st Snodgrass, Mrs A. J., Kippilaw, Dalkeith, Mare, "Swallow."
- 2nd Snodgrass, Mrs A. J., Kippilaw, Dalkeith, Gelding, "Blue Sky."
- 3rd Snodgrass, Mrs A. J., Kippilaw, Dalkeith, Gelding, "Silver King."
- 4th Dawson, J. D., 180 Riverford Road, Newlands, Glasgow, Gelding, "Black Beauty."
- 5th Sinclair, James T., Wick, Gelding, "Kiloran."

CLASS 3. JUMPING COMPETITION, confined to Competitors permanently resident in Scotland. The Horse or Pony to have been the property of the Competitor since 1st May 1948.—PREMIUMS, £20, £10, £5, £3, and £2.

- 1st Sneddon, Mrs A. B., Easter Croft, Caldercruix, Gelding, "Drumhillagh Lad."
- 2nd Snodgrass, Mrs A. J., Kippilaw, Dalkeith, Gelding, "Blue Sky."
- 3rd Stark, James, Baillieston, Glasgow, Gelding, "Sandy."
- 4th Snodgrass, Mrs A. J., Kippilaw, Dalkeith, Mare, "Swallow."
- 5th Dawson, J. D., 180 Riverford Road, Newlands, Glasgow, Gelding, "Black Beauty."

CLASS 4. OPEN JUMPING COMPETITION.—

PREMIUMS, £25, £15, £10, £7, and £3.

- 1st Snodgrass, Mrs A. J., Kippilaw, Dalkeith, Gelding, "Blue Sky."
- 2nd Sneddon, Mrs A. B., Easter Croft, Caldercruix, Gelding, "Drumhillagh Lad."
- 3rd Hamilton, Robert, Muirend, Glasgow, Gelding, "Gold Mine."
- 4th Barrie, Margot, "Davaar," Busby, Lanarkshire, Mare, "The Wren."
- 5th Stark, James, Baillieston, Glasgow, Gelding, "Sandy."

SHEEP.

BLACKFACE.

PRESIDENT'S CHAMPION MEDAL
for best Blackface Sheep.

No. 608 Wallace, A. L. P. F., of Candacraig, Candacraig, Strathdon.

Reserve—No. 604 Macfarlane, James, Hartwoodmyres, Selkirk, "Standard Bearer."

The "Angus" Perpetual Silver Challenge Cup, value £80, for the best Blackface Sheep, "Extra Stock" eligible to compete. This Cup was presented by the Angus Agricultural Association to commemorate the holding of the Society's Annual Show at Dundee in 1933.

No. 608 Wallace, A. L. P. F., of Candacraig, Candacraig, Strathdon.

The "James Archibald" Prize, of about £20, for the best Sheep in the Blackface Classes (excluding Lambs), "Extra Stock" eligible to compete. This Prize consists of the annual free income from a fund of £600, gifted by the late David Archibald, Christchurch, New Zealand, to found a Prize to be offered at the Annual Shows of the Society in commemoration of his brother, the late James Archibald, Overshiels, Stow.

No. 608 Wallace, A. L. P. F., of Candacraig, Candacraig, Strathdon.

CLASS 90. TUP, three Shear and over.—PREMIUMS,
£12, £8, £4, and £2.

- 1st No. 608 Wallace, A. L. P. F., of Candacraig, Candacraig, Strathdon.
 2nd No. 604 Macfarlane, James, Hartwoodmyres, Selkirk, "Standard Bearer."
 3rd No. 607 Rosebery and Midlothian, The Earl of, K.T., P.C., D.S.O., M.C., Moorfoot Farm, Gorebridge, "Classic."
 4th No. 598 Bruges, W. & W. I., Laighwood, Dunkeld, "Jimmy Mac."
 V No. 601 Glasgow, Corporation of, Brackenhirst Farm, Airdrie, "Victory."
 H No. 605 M'Taggart, John, Muirhouses, Duntocher, "Posterity."
 C No. 600 Glasgow, Corporation of, Brackenhirst Farm, Airdrie, "Home Choice."

CLASS 91. TUP, two Shear.—PREMIUMS,
£12, £8, £4, and £2.

- 1st No. 614 Hamilton, Robert C., South Cobbinshaw, West Calder.
 2nd No. 609 Bruges, W. & W. I., Laighwood, Dunkeld, "Mountbatten."
 3rd No. 615 Macfarlane, William G., Fanns, Ashkirk, Selkirk.
 4th No. 618 Wallace, A. L. P. F., of Candacraig, Candacraig, Strathdon, "Lonach."
 V No. 610 Chrystal, Ian P., Glenbanchor, Newtonmore, "Laighwood."
 H No. 617 Stewart, John, Craigendunton, Fenwick.

CLASS 92. SHEARLING TUP.—PREMIUMS,
£12, £8, £4, and £2.

- 1st No. 621 Black, John S. T., Fisherton, Dunure, "Wandel."
- 2nd No. 631 Glasgow, Corporation of, Brackenhirst Farm, Airdrie.
- 3rd No. 633 MacGillivray, John & D. P., Calrossie, Nigg, Ross-shire.
- 4th No. 626 Bruges, W. & W. I., Laighwood, Dunkeld, "Look Again."
- V No. 636 M'Taggart, John, Muirhouses, Duntocher, "Four Square."
- H No. 622 Bowser, D. S., Argaty, Doune, Perthshire.
- C No. 630 Glasgow, Corporation of, Brackenhirst Farm, Airdrie.
- C No. 640 Wallace, A. L. P. F., of Candacraig, Strathdon, Aberdeen-shire.

CLASS 93. TUP LAMB.—PREMIUMS,
£5, £3, and £2.

- 1st No. 646 Macfarlane, James, Hartwoodmyres, Selkirk.
- 2nd No. 652 Paton, James B., Lettre, Killearn, Stirlingshire.
- 3rd No. 647 Macfarlane, James, Hartwoodmyres, Selkirk.

The "Lochlane" Silver Challenge Cup, value £75, for best Group of three Blackface Sheep, consisting of Ewe, Gimmer, and Ewe Lamb, drawn from Classes 94 to 96, "Extra Stock" eligible to compete. Presented by Mr and Mrs Francis A. Rottenburg, Lochlane, Crieff.

Nos. 668, 689, 700 Macfarlane, James, Hartwoodmyres, Selkirk.

CLASS 94. EWE, above one Shear (born before 1947), with Lamb at foot.—PREMIUMS, £10, £5, £3, and £2.

- 1st No. 675 Rosebery and Midlothian, The Earl of, K.T., P.C., D.S.O., M.C., Moorfoot Farm, Gorebridge, Midlothian, "Moorfoot Belle."
- 2nd No. 668 Macfarlane, James, Hartwoodmyres, Selkirk, "Lady Peggy."
- 3rd No. 664 Glasgow, Corporation of, Brackenhirst Farm, Airdrie, "Lady Margaret."
- 4th No. 669 Macfarlane, James, Hartwoodmyres, Selkirk.
- V No. 666 Glasgow, Corporation of, Brackenhirst Farm, Airdrie, "Lady May."
- H No. 661 Cameron, Peter R., Dalbeg, Grantown-on-Spey, "Nell."
- C No. 658 Bowser, D. S., Argaty, Doune, Perthshire, "Hope."
- C No. 667 Macfarlane, James, Hartwoodmyres, Selkirk.

CLASS 95. SHEARLING EWE or GIMMER (born in 1947).—
PREMIUMS, £10, £5, £3, and £2.

- 1st No. 689 Macfarlane, James, Hartwoodmyres, Selkirk, "Border Queen."
- 2nd No. 690 Macfarlane, James, Hartwoodmyres, Selkirk.
- 3rd No. 695 Smith, J. & A., Haughton, Glenkindie, "Myrena."
- 4th No. 688 Glasgow, Corporation of, Brackenhirst Farm, Airdrie, "Lady Douglas."
- V No. 691 MacGillivray, John & D. P., Calrossie, Nigg, Ross-shire.
- H No. 693 M'Taggart, John, Muirhouses, Duntocher, "Merry Thought."
- C No. 692 MacGillivray, John & D. P., Calrossie, Nigg, Ross-shire.

CLASS 96. EWE LAMB.—PREMIUMS,
£5, £3, and £2.

- 1st No. 700 Macfarlane, James, Hartwoodmyres, Selkirk.
 2nd No. 699 Glasgow, Corporation of, Brackenhiirst Farm, Airdrie.
 3rd No. 701 Macfarlane, James, Hartwoodmyres, Selkirk.

CHEVIOT.

PRESIDENT'S CHAMPION MEDAL
for best Cheviot Sheep.

- No. 707 Hedley, George, Nether Horsburgh, Innerleithen, "Lucky Lad."
Reserve—No. 722 Roxburghe, The Duke of, Attonburn, Yetholm, Kelso.

Borthwick Perpetual Challenge Cup, value £38, gifted by Mr J. Borthwick,
for best Sheep in the Cheviot Classes. "Extra Stock" eligible to compete.
 Given by the Cheviot Sheep Society.

- No. 707 Hedley, George, Nether Horsburgh, Innerleithen, "Lucky Lad."

CLASS 97. TUP, above one Shear.—PREMIUMS,
£12, £8, £4, and £2.

- 1st No. 707 Hedley, George, Nether Horsburgh, Innerleithen, "Lucky Lad."
 2nd No. 708 Roxburghe, The Duke of, Attonburn, Yetholm, Kelso.
 3rd No. 706 Elliot, John, Blackhaugh, Clovenfords.
 4th No. 709 Roxburghe, The Duke of, Attonburn, Yetholm, Kelso.

CLASS 98. SHEARLING TUP.—PREMIUMS,
£12, £8, £4, and £2.

- 1st No. 713 Hedley, George, Nether Horsburgh, Innerleithen.
 2nd No. 715 Roxburghe, The Duke of, Attonburn, Yetholm, Kelso.
 3rd No. 711 Elliot, John, Blackhaugh, Clovenfords.
 4th No. 712 Hedley, George, Nether Horsburgh, Innerleithen.
 V No. 714 Roxburghe, The Duke of, Attonburn, Yetholm, Kelso.
 H No. 710 Elliot, John, Blackhaugh, Clovenfords.

CLASS 99. EWE, above one Shear, with Lamb at foot.—
PREMIUMS, £10, £5, £3, and £2.

- 1st No. 722 Roxburghe, The Duke of, Attonburn, Yetholm, Kelso.
 2nd No. 721 Roxburghe, The Duke of, Attonburn, Yetholm, Kelso.
 3rd No. 717 Hedley, George, Nether Horsburgh, Innerleithen.
 4th No. 720 Mundell, Mrs M., Delny, Ross-shire.
 V No. 719 Mundell, Mrs M., Delny, Ross-shire.

CLASS 100. SHEARLING EWE or GIMMER.—PREMIUMS,
£10, £5, £3, and £2.

- 1st No. 724 Hedley, George, Nether Horsburgh, Innerleithen.
2nd No. 728 Roxburghe, The Duke of, Attonburn, Yetholm, Kelso.
3rd No. 723 Hedley, George, Nether Horsburgh, Innerleithen.
4th No. 727 Roxburghe, The Duke of, Attonburn, Yetholm, Kelso.
V No. 726 Mundell, Mrs M., Delny, Ross-shire.
H No. 725 Mundell, Mrs M., Delny, Ross-shire.

NORTH COUNTRY CHEVIOT.

PRESIDENT'S CHAMPION MEDAL
for best North Country Cheviot Sheep.

- No. 737 MacGillivray, William, Glastullich, Nigg, Ross-shire, "Mighty Fine."

Reserve—No. 782 MacGillivray, John & D. P., Calrossie, Nigg, Ross-shire.

The Duke of Sutherland Perpetual Challenge Cup, value £50, *for best North Country Cheviot Sheep. "Extra Stock" eligible to compete.* Presented by His Grace The Duke of Sutherland, K.T., P.C.

- No. 737 MacGillivray, William, Glastullich, Nigg, Ross-shire, "Mighty Fine."

Silver Challenge Cup, value £25, *for the best registered North Country Cheviot Sheep.* Presented by the North Country Cheviot Sheep Society.

- No. 753 Macadie, Donald C., Knockglass, Westfield, Thurso.

CLASS 101. TUP, above one Shear.—PREMIUMS,
£12, £8, £4, and £2.

- 1st No. 737 MacGillivray, William, Glastullich, Nigg, Ross-shire, "Mighty Fine."
2nd No. 735 Macadie, Donald C., Knockglass, Westfield, Thurso, "Achscrabster Harry's Choice" (353).
3rd No. 740 MacKenzie, Messrs, Achalone, Shebster, Thurso, "Biggins Sunrise."
4th No. 738 Mackay, Benjamin S., Geiselittle, Thurso, "North Calder Renown."
V No. 746 Sinclair, Dr G. H., Nottingham, Latheron, Caithness.
H No. 741 MacKenzie, Messrs, Achalone, Shebster, Thurso, "Biggins Smasher."
C No. 739 M'Kay, W. C. S., Biggins, Killinister, Wick, "The Swell."
C No. 744 Morris, John, Borlum, Reay, Thurso, "Don."

CLASS 102. SHEARLING TUP.—PREMIUMS,
£12, £8, £4, and £2.

- 1st No. 753 Macadie, Donald C., Knockglass, Westfield, Thurso.
 2nd No. 755 Macadie, Donald C., Knockglass, Westfield, Thurso.
 3rd No. 756 MacGillivray, John & D. P., Calrossie, Nigg, Ross-shire.
 4th No. 765 Mill, Henry, Achscrabster, Thurso.
 V No. 757 MacGillivray, John & D. P., Calrossie, Nigg, Ross-shire.
 H No. 762 M'Kay, W. C. S., Biggins, Killinister, Wick.
 C No. 758 Mackay, Benjamin S., Geiselittle, Thurso.
 C No. 759 Mackay, Benjamin S., Geiselittle, Thurso.
 C No. 761 M'Kay, W. C. S., Biggins, Killinister, Wick.

CLASS 103. TUP LAMB.—PREMIUMS,
£5, £3, and £2.

- 1st No. 773 Dudgeon, W. Gordon, Fload, Dornoch, Sutherland, "Fload King."
 2nd No. 775 Swanson, Alexander, Tister, Halkirk, Caithness.
 3rd No. 772 Dudgeon, W. Gordon, Fload, Dornoch, Sutherland, "Fload Royal."
 V No. 771 Dudgeon, W. Gordon, Crakaig, Loth, Sutherland, "Crakaig King."
 H No. 774 M'Kay, W. C. S., Biggins, Killinister, Wick.
 C No. 770 Dudgeon, W. Gordon, Crakaig, Loth, Sutherland, "Crakaig Prince."

CLASS 104. EWE, above one Shear, with Lamb at foot.—
PREMIUMS, £10, £5, £3, and £2.

- 1st No. 782 MacGillivray, John & D. P., Calrossie, Nigg, Ross-shire.
 2nd No. 776 Dudgeon, W. Gordon, Crakaig, Loth, Sutherland, "Crakaig Winnie."
 3rd No. 784 Oag, William, Dalmore, Alness, Ross-shire.
 4th No. 785 Swanson, Alexander, Tister, Halkirk, Caithness.
 V No. 780 Innes, Andrew, North Calder, Thurso.
 H No. 777 Dudgeon, W. Gordon, Crakaig, Loth, Sutherland, "Crakaig Betty."
 C No. 783 Mundell, George, Ladystone, Bunchrew, Inverness-shire.

CLASS 105. SHEARLING EWE or GIMMER.—PREMIUMS,
£10, £5, £3, and £2.

- 1st No. 792 Mill, Henry, Achscrabster, Thurso.
 2nd No. 791 M'Kay, B. S., West Burn, Murkle, Thurso.
 3rd No. 789 Macadie, Donald C., Knockglass, Westfield, Thurso.
 4th No. 790 Macadie, Donald C., Knockglass, Westfield, Thurso.
 V No. 787 Innes, Andrew, North Calder, Thurso.
 H No. 788 Innes, Andrew, North Calder, Thurso.
 C No. 786 Clyne, George, Noss, Wick.

CLASS 106. EWE LAMB.—PREMIUMS,
£5, £3, and £2.

- 1st No. 795 M'Kay, W. C. S., Biggins, Killinister, Wick.
 2nd No. 797 Swanson, Alexander, Tister, Halkirk, Caithness.
 3rd No. 796 Oag, William, Dalmore, Alness, Ross-shire.
 V No. 793 Dudgeon, W. Gordon, Crakaig, Loth, Sutherland, "Crakaig Alex."
 H No. 794 Dudgeon, W. Gordon, Fload, Dornoch, Sutherland, "Fload Lady."

BORDER LEICESTER.

PRESIDENT'S CHAMPION MEDAL for best Border Leicester Sheep.

No. 800 Black, T., Balig, Ayr, " King o' Carrick " (14,084).

Reserve—No. 817 Mansfield Estates, Scone Palace, Perth, (BL 63 B) X 2.

Renfrewshire Perpetual Gold Challenge Cup, value £500, for best *Border Leicester Sheep*, "*Extra Stock*" eligible to compete. This Cup, along with an endowment of £500, was provided from money collected in Renfrewshire by the late Provost Muir M'Kean of Paisley, and is in commemoration of the Society's first Show in the County of Renfrew in 1913.

No. 800 Black, T., Balig, Ayr, " King o' Carrick " (14,084).

Reserve—No. 817 Mansfield Estates, Scone Palace, Perth, (BL 63 B) X 2.

Tweeddale Gold Medal, value about £25, for best *Border Leicester Sheep*. "*Extra Stock*" eligible to compete. Annual free income from Fund of £500.

No. 800 Black, T., Balig, Ayr, " King o' Carrick " (14,084).

Special Prize of £10 for best *Male animal in the Border Leicester Classes*, registered or eligible for registration in the *Border Leicester Flock Book*. Animals entered as "*Extra Stock*" not eligible. Given by the Society of Border Leicester Sheep Breeders.

No. 800 Black, T., Balig, Ayr, " King o' Carrick " (14,084).

CLASS 107. TUP, above one Shear.—PREMIUMS, £12, £8, £4, and £2.

- 1st No. 800 Black, T., Balig, Ayr, " King o' Carrick " (14,084).
- 2nd No. 804 Mansfield Estates, Scone Palace, Perth, " Rising Light " (14,528).
- 3rd No. 801 Cochran, Lieut.-Colonel Lord, of Cults, Crawford Priory, Springfield, Fife, " Smailholm Lucky Laddie " (14,542).
- 4th No. 803 Forrest, Robert, Preston, Duns, " Thorn Magnet " (14,568).
- V No. 798 Anderson, W. L., Morpie, Montrose, " Balig."
- H No. 802 Cumming, Mrs Norah I., Allanfearn, Inverness, " Balbinny Warrior " (14,289).
- C No. 799 Bell, James, East Brae, Doune, Perthshire.

CLASS 108. SHEARLING TUP.—PREMIUMS,
£12, £8, £4, and £2.

- 1st No. 817 Mansfield Estates, Scone Palace, Perth, (BL 63 B) X 2.
 2nd No. 815 Grant, Alan H. B., Thorn, Blairgowrie.
 3rd No. 816 Grant, Alan H. B., Thorn, Blairgowrie.
 4th No. 810 Cumming, Mrs Norah I., Allanfearn, Inverness, "Gourdas Best."
 V No. 821 Murray, R. G., Spittal, Biggar, "Privy Seal," (BL 32 A) X 1.
 H No. 805 Anderson, W. L., Morphie, Montrose.
 C No. 812 Forrest, Robert, Preston, Duns, "Noble Investment."
 C No. 820 Morison, J. Miller, Newmiln, Perth, (BL 17 H) X 9.

CLASS 109. TUP LAMB.—PREMIUMS,
£10, £5, £3, and £2.

- 1st No. 835 Grant, Alan H. B., Thorn, Blairgowrie.
 2nd No. 827 Arnott, George W., Bridgend, Fraserburgh.
 3rd No. 834 Grant, Alan H. B., Thorn, Blairgowrie.
 4th No. 825 Anderson, W. L., Morphie, Montrose.
 V No. 837 Mansfield Estates, Estates Office, Scone Palace, Perth.
 H No. 829 Black, T., Balig, Ayr.
 C No. 838 Mansfield Estates, Estates Office, Scone Palace, Perth.

Special Prize of £10 for best Female animal in the Border Leicester Classes, registered or eligible for registration in the Border Leicester Flock Book. Animals entered as "Extra Stock" not eligible. Given by the Society of Border Leicester Sheep Breeders.

No. 859 Grant, Alan H. B., Thorn, Blairgowrie.

CLASS 110. EWE, above one Shear.—PREMIUMS,
£10, £5, £3, and £2.

- 1st No. 845 Black, T., Balig, Ayr, (BL 94 A) V 5.
 2nd No. 852 Murray, R. G., Spittal, Biggar, (BL 381) W 10.
 3rd No. 851 Mansfield Estates, Estates Office, Scone Palace, Perth, (BL 63 B) V 4.
 4th No. 849 Grant, Alan H. B., Thorn, Blairgowrie.
 V No. 844 Anderson, W. L., Morphie, Montrose.
 H No. 848 Forrest, Robert, Preston, Duns.
 C No. 847 Cumming, Mrs Norah I., Allanfearn, Inverness.
 C No. 850 Grant, Alan H. B., Thorn, Blairgowrie.

CLASS 111. SHEARLING EWE or GIMMER.—PREMIUMS,
£10, £5, £3, and £2.

- 1st No. 859 Grant, Alan H. B., Thorn, Blairgowrie.
 2nd No. 862 Morison, J. Miller, Newmiln, Perth, (BL 40 E) X 4.
 3rd No. 863 Murray, R. G., Spittal, Biggar, (BL 381) X 2.
 4th No. 864 Murray, R. G., Spittal, Biggar, (BL 381) X 9.
 V No. 861 Morison, J. Miller, Newmiln, Perth, (BL 17 H) X 20.
 H No. 854 Black, T., Balig, Ayr.
 C No. 853 Anderson, W. L., Morphie, Montrose.
 C No. 857 Forrest, Robert, Preston, Duns.

CLASS 112. EWE LAMB.—PREMIUMS,
£5, £3, and £2.

- 1st No. 867 Arnott, George W., Bridgend, Fraserburgh.
- 2nd No. 871 Grant, Alan H. B., Thorn, Blairgowrie.
- 3rd No. 872 Mansfield Estates, Estates Office, Scone Palace, Perth.
- V No. 875 Morison, J. Miller, Newmiln, Perth.
- H No. 870 Grant, Alan H. B., Thorn, Blairgowrie.
- C No. 866 Anderson, W. L., Morphie, Montrose.
- C No. 874 Morison, J. Miller, Newmiln, Perth.
- C No. 876 Murray, R. G., Spittal, Biggar.

HALF-BRED.

PRESIDENT'S CHAMPION MEDAL
for best Half-Bred Sheep.

No. 880 Sandilands, William, Charterhouse, Kelso.

Reserve—No. 877 Barr, W. H. & R., Upper Dalhousie, Bonnyrigg, Midlothian.

CLASS 113. EWE, above one Shear.—PREMIUMS,
£10, £5, and £2.

- 1st No. 880 Sandilands, William, Charterhouse, Kelso.
- 2nd No. 877 Barr, W. H. & R., Upper Dalhousie, Bonnyrigg, Midlothian.
- 3rd No. 878 Clark, Thomas, Over Roxburgh, Kelso.
- V No. 881 Todd, Thomas, Manorhill, Kelso.

CLASS 114. SHEARLING EWE or GIMMER.—PREMIUMS,
£10, £5, and £2.

- 1st No. 882 Barr, W. H. & R., Upper Dalhousie, Bonnyrigg, Midlothian.
- 2nd No. 886 Fairnington Estates, Ltd., Fairnington, Roxburgh.
- 3rd No. 885 Clark, Thomas, Over Roxburgh, Kelso.
- V No. 884 Clark, Thomas, Over Roxburgh, Kelso.
- H No. 887 Fairnington Estates, Ltd., Fairnington, Roxburgh.
- C No. 883 Blythe, Charles, & Sons, Barberfield, Haddington, East Lothian.
- C No. 888 Todd, Thomas, Manorhill, Kelso.

CLASS 115. EWE LAMB.—PREMIUMS,
£5, £3, and £2.

- 1st No. 889 Barr, W. H. & R., Upper Dalhousie, Bonnyrigg, Midlothian.
- 2nd No. 892 Sandilands, William, Charterhouse, Kelso.
- 3rd No. 890 Barr, W. H. & R., Upper Dalhousie, Bonnyrigg, Midlothian.
- V No. 891 Clark, Thomas, Over Roxburgh, Kelso.

OXFORD DOWN.

*PRESIDENT'S CHAMPION MEDAL
for best Oxford Down Sheep.*

No. 925 Osborne, W. F., Hatton, Leven.

Reserve—No. 916 Templeton, M., Charterhouse, Kelso.**CLASS 116. SHEARLING TUP.—PREMIUMS,
£8, £5, and £3.**

1st	No. 904	Templeton, M., Charterhouse, Kelso.
2nd	No. 906	Templeton, M., Charterhouse, Kelso.
3rd	No. 896	Fairnington Estates, Ltd., Fairnington, Roxburgh.
V	No. 895	Fairnington Estates, Ltd., Fairnington, Roxburgh.
H	No. 897	Forrest, Robert, Preston, Duns.
C	No. 893	Cameron, John A., Balbuthie, Kilconquhar.
C	No. 894	Cameron, John A., Balbuthie, Kilconquhar.
C	No. 903	Osborne, W. F., Hatton, Leven.
C	No. 905	Templeton, M., Charterhouse, Kelso.

**CLASS 117. SHEARLING EWE or GIMMER.—PREMIUMS,
£8, £5, and £3.**

1st	No. 916	Templeton, M., Charterhouse, Kelso.
2nd	No. 909	Fairnington Estates, Ltd., Fairnington, Roxburgh.
3rd	No. 912	Forrest, Robert, Preston, Duns.
V	No. 910	Fairnington Estates, Ltd., Fairnington, Roxburgh.
H	No. 911	Forrest, Robert, Preston, Duns.
C	No. 908	Cameron, John A., Balbuthie, Kilconquhar.
C	No. 913	Lawson, William H., Frithfield, Anstruther.
C	No. 917	Templeton, M., Charterhouse, Kelso.

**CLASS 118. TUP LAMB.—PREMIUMS,
£8, £5, and £3.**

1st	No. 925	Osborne, W. F., Hatton, Leven.
2nd	No. 919	Cameron, John A., Balbuthie, Kilconquhar.
3rd	No. 926	Templeton, M., Charterhouse, Kelso.
V	No. 924	Osborne, W. F., Hatton, Leven.
H	No. 923	Lawson, William H., Frithfield, Anstruther.
C	No. 927	Templeton, M., Charterhouse, Kelso.
C	No. 928	Templeton, M., Charterhouse, Kelso.

**CLASS 119. EWE LAMB.—PREMIUMS,
£5, £3, and £2.**

1st	No. 934	Templeton, M., Charterhouse, Kelso.
2nd	No. 936	Templeton, M., Charterhouse, Kelso.
3rd	No. 935	Templeton, M., Charterhouse, Kelso.
V	No. 931	Fairnington Estates, Ltd., Fairnington, Roxburgh.
H	No. 930	Fairnington Estates, Ltd., Fairnington, Roxburgh.
C	No. 932	Lawson, William H., Frithfield, Anstruther.

SUFFOLK.

PRESIDENT'S CHAMPION MEDAL for best Suffolk Sheep.

No. 949 Turnbull, Alexander Robertson, East Camno, Meigle, " Benacre Umpire " (28,956).

Reserve—No. 951 Barr, Robert, Upper Dalhousie, Bonnyrigg, Midlothian.

Silver Challenge Cup for best Group of Suffolk Sheep, consisting of one Tup (one shear and over), one Shearling Ewe or Gimmer, one Tup Lamb, and one Ewe Lamb—the Females and Tup Lamb must be bred by Exhibitor—drawn from Classes 120 to 123. Presented by Sir William Prince-Smith, Bt., of Southburn, Driffeld.

Nos. 943, 958, 977, 994 Rintoul, William, Pratis, Leven.

CLASS 120. TUP, one Shear and over.—PREMIUMS, £10, £7, and £3.

- 1st No. 949 Turnbull, Alexander Robertson, East Camno, Meigle, " Benacre Umpire " (28,956).
- 2nd No. 937 Barr, Robert, Upper Dalhousie, Bonnyrigg, Midlothian, " Brantham Banner " (28,567).
- 3rd No. 943 Rintoul, William, Pratis, Leven.
- V No. 941 Fraser, Hugh, Linton Burnfoot, Kelso.
- H No. 945 Southburn Estates, Southburn, Driffeld, East Yorks., (A 7).
- C No. 942 Osborne, W. F., Hatton, Leven, " Whitelaw Banker " (27,908).
- C No. 944 Rintoul, William, Pratis, Leven.
- C No. 946 Southburn Estates, Southburn, Driffeld, East Yorks., (A 7).

CLASS 121. SHEARLING EWE or GIMMER.—PREMIUMS, £10, £5, and £2.

- 1st No. 951 Barr, Robert, Upper Dalhousie, Bonnyrigg, Midlothian.
- 2nd No. 958 Rintoul, William, Pratis, Leven.
- 3rd No. 960 Southburn Estates, Southburn, Driffeld, East Yorks.
- V No. 964 Turnbull, Alexander Robertson, East Camno, Meigle, (D 44 R 43).
- H No. 963 Tullis, Russell & Co., Ltd., Auchmuty and Rothes Mills, Markinch, Fife.
- C No. 956 Bogue, William, Gourlaw, Rosewell, Midlothian.
- C No. 961 Southburn Estates, Southburn, Driffeld, East Yorks.
- C No. 965 Turnbull, Alexander Robertson, East Camno, Meigle, (D 44 R 1).

CLASS 122. TUP LAMB.—PREMIUMS,
£10, £5, and £2.

- 1st No. 980 Southburn Estates, Southburn, Driffield, East Yorks.
2nd No. 982 Tullis, Russell & Co., Ltd., Auchmuty and Rothes Mills,
Markinch, Fife.
3rd No. 977 Rintoul, William, Pratis, Leven.
V No. 981 Thomson, William A., Newton, Markinch, Fife.
H No. 979 Southburn Estates, Southburn, Driffield, East Yorks.
C No. 978 Rintoul, William, Pratis, Leven.
C No. 984 Turnbull, Alexander Robertson, East Camno, Meikle.

CLASS 123. EWE LAMB.—PREMIUMS,
£5, £3, and £2.

- 1st No. 994 Rintoul, William, Pratis, Leven.
2nd No. 995 Southburn Estates, Southburn, Driffield, East Yorks.
3rd No. 996 Southburn Estates, Southburn, Driffield, East Yorks.
V No. 998 Tullis, Russell & Co., Ltd., Auchmuty and Rothes Mills,
Markinch, Fife.
H No. 986 Barr, Robert, Upper Dalhousie, Bonnyrigg, Midlothian.
C No. 987 Barr, Robert, Upper Dalhousie, Bonnyrigg, Midlothian.
C No. 999 Turnbull, Alexander R., East Camno, Meikle.

GOATS.

PRESIDENT'S CHAMPION MEDAL for best animal in the Goat Classes.

No. 1027 M'Lagan, Mrs E. G., 36 Mannerston, Blackness, Linlithgow (Saanen), " Kildale Ossian " (S 987).

No. 1012 Scott, Mrs J., Nowell Poultry Farm, Fossoway, Kinross-shire (British), " Nowell Marigold " (17,058).

Challenge Cup, value £38, *for the best Female Goat in the Show.* Given by the late Lord Dewar, London.

No. 1012 Scott, Mrs J., Nowell Poultry Farm, Fossoway, Kinross-shire (British), " Nowell Marigold " (17,058).

The Competition for Goats is recognised by the British Goat Society, Roydon Road, Diss, Norfolk, which will give Challenge Certificates (qualifying for a Championship) :—

For the best Female Goat that has borne a kid.

No. 1012 Scott, Mrs J., Nowell Poultry Farm, Fossoway, Kinross-shire (British), " Nowell Marigold " (17,058).

For the best dual purpose Goat that has borne a kid.

Not awarded.

A Bronze Medal for the best exhibit.

No. 1027 M'Lagan, Mrs E. G., 36 Mannerston, Blackness, Linlithgow (Saanen), " Kildale Ossian " (S 987).

CLASS 124. FEMALE GOAT that has borne a Kid, any age, in Milk, entered in or eligible for the Toggenburg, British Toggenburg or British Alpine Section of the Herd-Book.—PREMIUMS, £4, £2, and £1.

1st No. 1001 Laing, Mrs J. M., Kellan Mill, Aros, Isle of Mull (British Toggenburg), " R2 Petersfield Petronella " (BTR 310).

2nd No. 1003 Swan, Miss Elinor, West Muirend House, Gillespie Road, Colinton, Edinburgh (British Toggenburg), " Swanston Beauty " (BT 1233).

3rd No. 1004 Swan, Miss Elinor, West Muirend House, Gillespie Road, Colinton, Edinburgh (British Toggenburg), " Faith of Swanston " (BTR 323).

V No. 1005 Swan, Miss Elinor, West Muirend House, Gillespie Road, Colinton, Edinburgh (British Toggenburg), " Swanston Sally " (BT 1385).

H No. 1002 Scott, Mrs J., Nowell Poultry Farm, Fossoway, Kinross-shire (British Alpine), " Nowell Escholtzia " (BA 3576).

CLASS 125. FEMALE GOAT that has borne a Kid, any age, in Milk. Any other variety.—PREMIUMS, £4, £2, and £1.

- 1st No. 1012 Scott, Mrs J., Nowell Poultry Farm, Fossoway, Kinross-shire (British), "Nowell Marigold" (17,058).
 2nd No. 1011 M'Lagan, Mrs E. G., 36 Mannerston, Blackness, Linlithgow (British Saanen), "Rosanna" (BS 4584).
 3rd No. 1008 Forsyth, Mrs Catherine, The Island House, Earnhill, Forres (British), "Ansy" (SR 3102).
 V No. 1010 Mackenzie, C. & D., Ballygown, Torloisk, Isle of Mull (British), "Quercus Mintbell" (HB 17,282).
 H No. 1007 Forsyth, Mrs Catherine, The Island House, Earnhill, Forres (British), "Puffella" (SR 3639).

CLASS 126. GOATLING that has not borne a Kid, over one but not exceeding two years. Any variety.—PREMIUMS, £4, £2, and £1.

- 1st No. 1016 Macdonald, Mrs M. A., Garrochty, Kingarth, Isle of Bute (British), "Garrochty Shepherdess" (18,026).
 2nd No. 1015 Laing, Mrs J. M., Kellan Mill, Aros, Isle of Mull (British), "Kinloch Aline" (HB 17,952).
 3rd No. 1017 M'Lagan, Mrs E. G., 36 Mannerston, Blackness, Linlithgow (British Toggenburg), "Northmoor Miracle" (BT 1702).
 V No. 1013 Elliott, Mrs Rachel, St Columba High Manse, Inverness (British Saanen) "Culduthel Lilac" (HB 18,324 P).
 H No. 1014 Elliott, Mrs Rachel, St Columba High Manse, Inverness (British Saanen), "Culduthel Daisy" (FB 2983 H).
 C No. 1009 Luke, J. A., Bona Lodge, Aldourie, Inverness (British Toggenburg), "Bona Babs" (HBBT 1825 H).

CLASS 127. FEMALE KID, not exceeding one year. Any variety.—PREMIUMS, £4, £2, and £1.

- 1st No. 1020 Macdonald, Mrs M. A., Garrochty, Kingarth, Isle of Bute (Anglo-Nubian), "Garrochty Glenmist."
 2nd No. 1018 Forsyth, Mrs C., The Island House, Earnhill, Forres (British), "Culbin Sonia."
 3rd No. 1019 Laing, Mrs J. M., Kellan Mill, Aros, Isle of Mull (British), "Spean Corduroy" (SR 5050 P).

CLASS 128. MALE GOAT, any age. Any variety.—PREMIUMS, £4, £2, and £1.

- 1st No. 1027 M'Lagan, Mrs E. G., 36 Mannerston, Blackness, Linlithgow (Saanen) "Kildale Ossian" (S 987).
 2nd No. 1026 Mackenzie, C. & D., Ballygown, Torloisk, Isle of Mull (British Saanen), "Tirley Palm" (BS 3140).
 3rd No. 1028 Scott, Mrs J., Nowell Poultry Farm, Fossoway, Kinross-shire (British Alpine), "Malpas Middleton" (BA 2857).
 V No. 1024 Laing, Mrs J. M., Kellan Mill, Aros, Isle of Mull (British Toggenburg), "§ 44 †Holywych Jolyon" (BT 1756 P).
 H No. 1022 Forsyth, Mrs C., The Island House, Earnhill, Forres (British Saanen), "†Frisky of Coltishall" (HB 4434).
 C No. 1023 Forsyth, Mrs C., The Island House, Earnhill, Forres (British Saanen), "Ickneild Eagle" (BS 5410).

CLASS 129. MILKING COMPETITION, for quantity, open to
Classes 124 and 125.—**PREMIUMS**, £4, £2, and £1.

- 1st No. 1011 M'Lagan, Mrs E. G., 36 Mannerston, Blackness, Linlithgow,
"Rosanna" (BS 4584).
2nd No. 1003 Swan, Miss Elinor, West Muirend House, Gillespie Road,
Colinton, Edinburgh, "Swanston Beauty" (BT 1233).
3rd No. 1010 Mackenzie, C. & D., Ballygown, Torloisk, Isle of Mull,
"Quercus Mintbell" (HB 17,282).

PIGS.

LARGE WHITE.

*PRESIDENT'S CHAMPION MEDAL
for best Large White Pig.*

No. 1063 Taylor, G. C., Moncur Farm, Inchtute, Perthshire, "Moncur Champion Lady 17th" (Vol. 64) (Ear No. 2686).

Reserve—No. 1055 Lawson, Thomas, Carriston, Markinch, Fife, "Carriston Champion Queen 30th" (Ear No. 1096).

Dundee Citizens' Perpetual Silver Challenge Cup, value about £75, *for the best Large White Pig, "Extra Stock" eligible to compete.* This Cup was presented by the Citizens of Dundee to commemorate the holding of the Society's Annual Show at Dundee in 1939.

No. 1063 Taylor, G. C., Moncur Farm, Inchtute, Perthshire, "Moncur Champion Lady 17th" (Vol. 64) (Ear No. 2686).

Reserve—No. 1055 Lawson, Thomas, Carriston, Markinch, Fife, "Carriston Champion Queen 30th" (Ear No. 1096).

Champion Medal, value £5 (or cash), *for best Large White Boar, "Extra Stock" eligible to compete.* Given by the National Pig-Breeders' Association.

No. 1030 Elder, Hugh, & Son, Ltd., City Mills, Dunfermline, "Wall Field Marshal 34th" (Vol. 63) (Ear No. 3204).

Special Prizes for Groups of three Large White Pigs bred by Exhibitor. One Boar (at least) must be included in the Group, and not more than one entry to be selected from any one Class. "Extra Stock" eligible to compete. PREMIUMS, £5, £3, and £2. Given by the National Pig-Breeders' Association.

1st Nos. 1045, 1065, 1076 Cox, J. Ernest, Methven Castle, Methven.

2nd Nos. 1032, 1063, 1075 Taylor, G. C., Moncur Farm, Inchtute, Perthshire.

3rd Nos. 1033, 1053, 1066 Elder, Hugh, & Son, Ltd., City Mills, Dunfermline, Fife.

CLASS 130. BOAR, born before 1st July 1947.—
PREMIUMS, £8, £4, and £2.

1st No. 1030 Elder, Hugh & Son, Ltd., City Mills, Dunfermline, "Wall Field Marshal 34th" (Vol. 63) (Ear No. 3204).

2nd No. 1029 Cox, J. Ernest, Methven Castle, Methven, "Methven Majestic 4th" (Ear No. 4725).

3rd No. 1032 Taylor, G. C., Moncur Farm, Inchtute, Perthshire, "Moncur East Lad 15th" (Vol. 63) (Ear No. 2516).

V No. 1031 Simpson, Andrew, & Sons, Randerston, Kingsbarns, Fife, "Yewden King David 51st" (Vol. 64) (Ear No. 2241).

**CLASS 131. BOAR, born in 1947, on or after 1st July—
PREMIUMS, £6, £4, and £2.**

- 1st No. 1043 Taylor, G. C., Moncur Farm, Inchture, Perthshire, "Wall Candidus 3rd" (Vol. 65) (Ear No. 4066).
- 2nd No. 1033 Elder, Hugh, & Son, Ltd., City Mills, Dunfermline, "Touch Field Marshal 3rd" (Vol. 64) (Ear No. 2449).
- 3rd No. 1034 Lawson, Thomas, Carriston, Markinch, Fife, "Ardencote Champion Boy 69th" (Ear No. AMJ 1433).
- V No. 1041 Simpson, Andrew, & Sons, Randerston, Kingsbarns, Fife, "Randerston Jubilee Lion 14th" (Vol. 65) (Ear No. 4313).
- H No. 1038 Milne, J., & Sons, Upper Affloch, Dunecht, Aberdeenshire, "Douneside Carrlad 5th" (Ear No. 406).
- C No. 1040 Parkhill Stock Farms, Ltd., c/o R. Lawson & Sons (Dyce), Ltd., Dyce, Aberdeenshire, "Goval Northern King 11th" (Ear No. PSF 2171).
- C No. 1042 Taylor, G. C., Moncur Farm, Inchture, Perthshire, "Moncur Turk 2nd" (Vol. 65) (Ear No. 3125).

**CLASS 132. BOAR, born in 1948.—PREMIUMS,
£6, £3, and £1.**

- 1st No. 1045 Cox, J. Ernest, Methven Castle, Methven, "Methven Majestic 9th" (Ear No. 5291).
- 2nd No. 1050 Taylor, G. C., Moncur Farm, Inchture, Perthshire, "Moncur Turk 4th" (Vol. 65) (Ear No. 3243).
- 3rd No. 1051 Taylor, G. C. Moncur Farm, Inchture, Perthshire, "Moncur Turk 3rd" (Vol. 65) (Ear No. 3242).
- V No. 1046 Elder, Hugh, & Son, Ltd., City Mills, Dunfermline (Ear No. 2556).
- H No. 1049 Simpson, Andrew, & Sons, Randerston, Kingsbarns, Fife, "Randerston King David" (Vol. 65) (Ear No. 4543).
- C No. 1047 Lawson, Thomas, Carriston, Markinch, Fife, "Carriston Jubilee Lion 147" (Ear No. 1402).

Champion Medal, value £5 (or cash), for best Large White Sow, "*Extra Stock*" eligible to compete. Given by the National Pig Breeders' Association.

- No. 1063 Taylor, G. C., Moncur Farm, Inchture, Perthshire, "Moncur Champion Lady 17th" (Vol. 64) (Ear No. 2686).

**CLASS 133. SOW, born before 1st July 1947.—PREMIUMS,
£8, £4, and £2.**

- 1st No. 1063 Taylor, G. C., Moncur Farm, Inchture, Perthshire, "Moncur Champion Lady 17th" (Vol. 64) (Ear No. 2686).
- 2nd No. 1055 Lawson, Thomas, Carriston, Markinch, Fife, "Carriston Champion Queen 30th" (Ear No. 1096).
- 3rd No. 1062 Simpson, Andrew, & Sons, Randerston, Kingsbarns, Fife, "Randerston Charm 7th" (Vol. 63) (Ear No. 3151).
- V No. 1054 Lawson, Thomas, Carriston, Markinch, Fife, "Carriston Queen Mary 12th" (Ear No. 404).
- H No. 1053 Elder, Hugh, & Son, Ltd., City Mills, Dunfermline, "Touch Molly Bane 15th" (Vol. 65) (Ear No. 2227).
- C No. 1052 Cox, J. Ernest, Methven Castle, Methven, "Methven Madam Matilda 21st" (Ear No. 4842).
- C No. 1064 Watson, George, Middlemuir, Strichen, Aberdeenshire, "Middlemuir Model" (Vol. 64) (Ear No. 553).

CLASS 134. SOW, born in 1947, on or after 1st July.—
PREMIUMS, £6, £4, and £2.

- 1st No. 1075 Taylor, G. C., Moncur Farm, Inchture, Perthshire, " Moncur Bonetta 55th " (Vol. 65) (Ear No. 2070).
 2nd No. 1065 Cox, J. Ernest, Methven Castle, Methven, " Methven Buttercup 5th " (Ear No. 5176).
 3rd No. 1066 Elder, Hugh, & Son, Ltd., City Mills, Dunfermline, " Touch Lassie 20th " (Vol. 65) (Ear No. 2433).
 V No. 1069 Leitch, Messrs, Inchstelly, Alves, Forres, " Inchstelly Mollington 3423rd " (Ear No. 3423).
 H No. 1070 Milne, J., & Sons, Upper Affloch, Dunecht, Aberdeenshire, (Ear No. 107).
 C No. 1067 Lawson, Thomas, Carriston, Markinch, Fife, " Carriston Sylvia 161st " (Ear No. 1220).
 C No. 1071 Park, Misses M. & J., Brunstane, Portobello, Midlothian, " Brunstane Jean 7th " (Ear No. 369).

CLASS 135. SOW, born in 1948.—PREMIUMS,
£6, £3, and £1.

- 1st No. 1076 Cox, J. Ernest, Methven Castle, Methven, " Methven Primrose 22nd " (Ear No. 5294).
 2nd No. 1080 Taylor, G. C., Moncur Farm, Inchture, Perthshire, " Moncur Baroness 23rd " (Vol. 65) (Ear No. 3246).
 3rd No. 1078 Lawson, Thomas, Carriston, Markinch, Fife, " Carriston Queen Mary 54th " (Ear No. 1405).
 V No. 1077 Elder, Hugh, & Son, Ltd., City Mills, Dunfermline (Ear No. 2561).

LARGE BLACK.

*PRESIDENT'S CHAMPION MEDAL
for best Large Black Pig.*

- No. 1082 Low-Mitchell, D. I., Clochtow, Forfar, " Thelveton-Malcolm 1st " (BA 59) (Ear No. 35).

- Reserve*—No. 1091 Reid, James, Willowbrae, Balhungie Den, Monifieth, Angus, " Willowbrae Rose 2nd " (BS 10,495) (Ear No. 1).

Silver Medal for the best Large Black Boar. Given by the Large Black Pig Society.

- No. 1082 Low-Mitchell, D. I., Clochtow, Forfar, " Thelveton Malcolm 1st " (BA 59) (Ear No. 35).

CLASS 136. BOAR, born before 1948.—PREMIUMS,
£8, £4, and £2.

- 1st No. 1082 Low-Mitchell, D. I., Clochtow, Forfar, " Thelveton Malcolm 1st " (BA 59) (Ear No. 35).
 2nd No. 1084 Tasker, John M., Cleikheim of Airlie, Kirriemuir, " Glenquiech Zulu 1 " (Ear No. 5321).
 3rd No. 1083 Reid, James, Willowbrae, Balhungie Den, Monifieth, Angus, " Royston Andrew " (BA 405).

CLASS 137. BOAR, born in 1948.—PREMIUMS,
£6, £3, and £1.

2nd No. 1086 Low-Mitchell, D. I., Clochtow, Forfar, " Kyleakin Dragon "
(Ear No. 4).

Silver Medal *for the best Large Black Sow.* Given by the Large Black Pig Society.

No. 1091 Reid, James, Willowbrae, Balhungie Den, Monifieth, Angus,
" Willowbrae Rose 2nd " (BS 10,495) (Ear No. 1).

CLASS 138. SOW, born before 1948.—PREMIUMS,
£8, £4, and £2.

1st No. 1091 Reid, James, Willowbrae, Balhungie Den, Monifieth, Angus,
" Willowbrae Rose 2nd " (BS 10,495) (Ear No. 1).

2nd No. 1089 Low-Mitchell, D. I., Clochtow, Forfar, " Thelveton Senora
157th " (BS 10,020).

3rd No. 1090 Low-Mitchell, D. I., Clochtow, Forfar, " Kyleakin Nocturne
10th " (AA 2316) (Ear No. 6).

V No. 1093 Tasker, John M., Cleikheim of Airlie, Kirriemuir, " Ingleby
Bluebird 4th " (BA 138).

CLASS 139. SOW, born in 1948.—PREMIUMS,
£6, £3, and £1.

1st No. 1099 Low-Mitchell, D. I., Clochtow, Forfar, " Kyleakin Senora
12th " (Ear No. 11).

2nd No. 1098 Bentley, K. J., Balmuir, Dundee, " Balmuir Pianette 1st "
(Ear No. 4).

POULTRY.

First Premium—TWENTY SHILLINGS. Second Premium—TEN SHILLINGS.
In each Class in which there are four or more entries a Third Prize of FIVE SHILLINGS may be awarded, provided there is sufficient merit in the pens.

Champion Challenge Silver Salver, value £45, for the best exhibit in the Poultry Classes—given by the late Lord Dewar. Messrs W. Binnie & Son, Garth House, Denny, who won the Salver outright in 1938, have kindly re-presented the Salver to the Society as a Perpetual Challenge Trophy.

No. 1 Binnie, W., & Son, Wester Garth, Denny.

Champion Silver Medals are offered as follows :—

1. *Best Cock, any variety.*

No. 1 Binnie, W., & Son, Wester Garth, Denny.

2. *Best Hen, any variety.*

No. 165 Lindsay, Robert, Windygates, Fife.

3. *Best Cockerel, any variety.*

No. 30 Binnie, W., & Son, Wester Garth, Denny.

4. *Best Pullet, any variety.*

No. 123 Rugg, John, Linderlis, Kirriemuir, Angus.

5. *Best Bantam, any variety.*

No. 179 Hartley, J. H., Holme Gate, Houghton, Carlisle.

6. *Best Waterfowl.*

No. 385 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

7. *Best Turkey.*

No. 421 Andrew, Mrs Jessie, South Tulloford, Old Meldrum.

8. *Best Utility Bird (Classes 70-81).*

No. 300 Morgan, William, Balcurvie, Windygates, Fife.

CLASS 1. LEGHORN—White—Cock.

- 1st No. 1 Binnie, W., & Son, Wester Garth, Denny.
 2nd No. 3 Russell, Thomas, Post Office, Pettinain, Lanark.
 V No. 2 Binnie, W., & Son, Wester Garth, Denny.

CLASS 2. LEGHORN—White—Hen.

- 1st No. 4 Binnie, W., & Son, Wester Garth, Denny.
 2nd No. 6 Russell, Thomas, Post Office, Pettinain, Lanark.
 V No. 5 Russell, Thomas, Post Office, Pettinain, Lanark.

CLASS 3. LEGHORN—White—Cockerel.

- 1st No. 7 Binnie, W., & Son, Wester Garth, Denny.

CLASS 4. LEGHORN—White—Pullet.

- 1st No. 8 Binnie, W., & Son, Wester Garth, Denny.

CLASS 5. LEGHORN—Any other Colour—Cock.

- 1st No. 9 Brown, Charles D., Ivy Bank, Kintore (Brown).
 2nd No. 10 Mealls, John, 16 West Borland Road, Denny (Brown).

CLASS 6. LEGHORN—Any other Colour—Hen.

- 1st No. 11 Mealls, John, 16 West Borland Road, Denny (Brown).
 2nd No. 13 Williamson, James, East Lochran, Blairadam, Kelty (Black).
 V No. 12 Mealls, John, 16 West Borland Road, Denny (Brown).

CLASS 7. LEGHORN—Any other Colour—Cockerel.

- 1st No. 14 Douglas-Hamilton, Lord Malcolm, O.B.E., D.F.C., Cullerne House, Findhorn, Morayshire (Brown).

CLASS 8. LEGHORN—Any other Colour—Pullet.

- 1st No. 17 Mealls, John, 16 West Borland Road, Denny (Brown).
 2nd No. 16 Mealls, John, 16 West Borland Road, Denny (Brown).
 3rd No. 18 Penny, J. G., Sauchie Poultry Farm, Crieff (Black).
 C No. 15 Douglas-Hamilton, Lord Malcolm, O.B.E., D.F.C., Cullerne House, Findhorn, Morayshire (Brown).

CLASS 9. MINORCA—Cock.

- 1st No. 19 Binnie, W., & Son, Wester Garth, Denny.
 2nd No. 20 Binnie, W., & Son, Wester Garth, Denny.
 3rd No. 22 M'Gregor, James, Badshalloch, Alexandria.
 V No. 24 Russell, Thomas, Post Office, Pettinain, Lanark.
 C No. 21 Falconer, Captain A. H., Ballaggan, Gollanfield, Inverness-shire.
 C No. 23 Macgregor, James Scott, Bridgend Bakery, Greenlaw, Berwick-shire.

CLASS 10. MINORCA—Hen.

- 1st No. 25 Binnie, W., & Son, Wester Garth, Denny.
 2nd No. 27 Macgregor, James Scott, Bridgend Bakery, Greenlaw, Berwickshire.
 3rd No. 26 Falconer, Captain A. H., Ballaggan, Gollanfield, Invernessshire.
 V No. 29 Russell, Thomas, Post Office, Pettinain, Lanark.
 C No. 28 Macgregor, James Scott, Bridgend Bakery, Greenlaw, Berwickshire.

CLASS 11. MINORCA—Cockerel.

- 1st No. 30 Binnie, W., & Son, Wester Garth, Denny.
 2nd No. 32 M'Gregor, James, Badshalloch, Alexandria.
 3rd No. 34 Russell, Thomas, Post Office, Pettinain, Lanark.
 C No. 33 Macgregor, James Scott, Bridgend Bakery, Greenlaw, Berwickshire.

CLASS 12. MINORCA—Pullet.

- 1st No. 35 Binnie, W., & Son, Wester Garth, Denny.
 2nd No. 36 Falconer, Captain A. H., Ballaggan, Gollanfield, Invernessshire.
 V No. 37 Russell, Thomas, Post Office, Pettinain, Lanark.

CLASS 13. SCOTCH GREY—Cock or Cockerel.

- 1st No. 43 Young, Professor Stephen, c/o T. D. Wardrop, Woodland, Girvan.
 2nd No. 39 Russell, Thomas, Post Office, Pettinain, Lanark.
 3rd No. 42 Young, Dr Stephen, 6 Woodside Place, Glasgow, C.3.
 V No. 41 Young, Dr Stephen, 6 Woodside Place, Glasgow, C.3.
 C No. 38 Murdoch, James, Cuil Farm, Aberfeldy.
 C No. 40 Wardrop, Thomas D., Woodland, Girvan.

CLASS 14. SCOTCH GREY—Hen or Pullet.

- 1st No. 48 Wardrop, Thomas D., Woodland, Girvan.
 2nd No. 50 Young, Dr Stephen, 6 Woodside Place, Glasgow, C.3.
 3rd No. 45 Alexander, James, Grangepeel, Busby, Glasgow.
 V No. 47 Murdoch, James, Cuil Farm, Aberfeldy.
 C No. 46 Murdoch, James, Cuil Farm, Aberfeldy.
 C No. 49 Young, Dr Stephen, 6 Woodside Place, Glasgow, C.3.

CLASS 15. PLYMOUTH ROCK—Cock.

- 1st No. 54 Oag, Mrs William, Dalmore, Alness, Ross-shire.
 2nd No. 52 Davidson, David, 16 Well Street, Monifieth, Angus.

CLASS 16. PLYMOUTH ROCK—Hen.

- 1st No. 55 M'Gillivray, J., Aldersyde, Milton of Campsie.

CLASS 17. PLYMOUTH ROCK—Cockerel.

1st No. 56 M'Gillivray, J., Aldersyde, Milton of Campsie.

CLASS 18. PLYMOUTH ROCK—Pullet.

1st No. 58 M'Gillivray, J., Aldersyde, Milton of Campsie.

2nd No. 57 Falconer, Captain A. H., Ballaggan, Gollanfield, Inverness-shire.

CLASS 19. ORPINGTON—Cock.

1st No. 59 Binnie, W., & Son, Wester Garth, Denny.

2nd No. 60 Gunn, Angus S., Glen-mavis House, Bathgate.

3rd No. 61 M'Gregor, James, Badshalloch, Alexandria.

CLASS 20. ORPINGTON—Hen.

1st No. 63 Binnie, W., & Son, Wester Garth, Denny.

2nd No. 64 Gunn, Angus S., Glen-mavis House, Bathgate.

CLASS 21. ORPINGTON—Cockerel or Pullet.

1st No. 66 Thomson, W., Ivy Cottage, Tynninghame, East Linton.

2nd No. 65 Shewan, Alexander, Mullochard, Grantown-on-Spey.

CLASS 22. WYANDOTTE—White—Cock.

1st No. 67 Binnie, W., & Son, Wester Garth, Denny.

2nd No. 68 Binnie, W., & Son, Wester Garth, Denny.

3rd No. 70 Russell, Thomas, Post Office, Pettinain, Lanark.

V No. 69 Falconer, Captain A. H., Ballaggan, Gollanfield, Inverness-shire.

CLASS 23. WYANDOTTE—White—Hen.

1st No. 74 Russell, Thomas, Post Office, Pettinain, Lanark.

2nd No. 71 Binnie, W., & Son, Wester Garth, Denny.

3rd No. 75 Russell, Thomas, Post Office, Pettinain, Lanark.

V No. 73 Falconer, Captain A. H., Ballaggan, Gollanfield, Inverness-shire.

C No. 72 Campbell, Sam M., Low Lann, Tynron, Dumfriesshire.

CLASS 24. WYANDOTTE—White—Cockerel.

1st No. 76 Binnie, W., & Son, Wester Garth, Denny.

2nd No. 80 Russell, Thomas, Post Office, Pettinain, Lanark.

3rd No. 79 M'Gregor, James, Badshalloch, Alexandria.

CLASS 25. WYANDOTTE—White—Pullet.

- 1st No. 81 Binnie, W., & Son, Wester Garth, Denny.
 2nd No. 83 Falconer, Captain A. H., Ballaggan, Gollanfield, Inverness-shire.
 3rd No. 84 M'Gregor, James, Badshalloch, Alexandria.
 C No. 82 Cowieson, J. T., Pitmedden Poultry Farm, Udny, Aberdeen-shire.

CLASS 26. WYANDOTTE—Any other Colour—Cock or Cockerel.*None awarded.***CLASS 27. WYANDOTTE—Any other Colour—Hen or Pullet.**

- 1st No. 89 Morgan, William, Balcurvie, Windygates, Fife (Silver).
 2nd No. 91 Telford, Miss, Breconside, Brampton, Cumberland.
 3rd No. 88 Hamilton, Thomas, Kirkton Kilns, Bathgate (Silver).
 C No. 87 Hamilton, Thomas, Kirkton Kilns, Bathgate (Silver).

CLASS 28. RHODE ISLAND RED—Cock.

- 1st No. 98 Morgan, William, Balcurvie, Windygates, Fife.
 2nd No. 100 Shaw, Robert, Tomnarroch Farm, Glenferness, Nairn.
 3rd No. 94 Bruce, William C., 1 Alexandria Place, Wick.
 V No. 99 Rugg, John, Linderlis, Kirriemuir, Angus.
 C No. 92 Brown, Charles D., Ivy Bank, Kintore, Aberdeenshire.
 C No. 93 Bruce, William C., 1 Alexandria Place, Wick.
 C No. 97 M'Gregor, James, Badshalloch, Alexandria.

CLASS 29. RHODE ISLAND RED—Hen.

- 1st No. 109 Robb, George, Cappuck Farm, Jedburgh.
 2nd No. 110 Rugg, John, Linderlis, Kirriemuir, Angus.
 3rd No. 108 Morgan, William, Balcurvie, Windygates, Fife.
 V No. 105 Cowieson, J. T., Pitmedden Poultry Farm, Udny, Aberdeen-shire.
 C No. 101 Alexander, James, Grangepeel, Busby, Glasgow.
 C No. 103 Bruce, William C., 1 Alexandria Place, Wick.
 C No. 104 Bruce, William C., 1 Alexandria Place, Wick.

CLASS 30. RHODE ISLAND RED—Cockerel.

- 1st No. 117 Thomson, W., Ivy Cottage, Tynninghame, East Lothian.
 2nd No. 113 Morgan, William, Balcurvie, Windygates, Fife.
 3rd No. 116 Russell, Thomas, Post Office, Pettinain, Lanark.
 V No. 111 M'Gillivray, J., Aldersyde, Milton of Campsie.
 C No. 112 Mackenzie, C. & D., Ballygown, Torloisk, Isle of Mull.
 C No. 114 Munro, Charles A., Cantray Home Farm, Croy, Gollanfield, Inverness-shire.

CLASS 31. RHODE ISLAND RED—Pullet.

- 1st No. 123 Rugg, John, Linderlis, Kirriemuir, Angus.
 2nd No. 121 Morgan, William, Balcurvie, Windygates, Fife.
 3rd No. 125 Shewan, Alexander, Mullochard, Grantown-on-Spey.
 V No. 119 M'Gillivray, J., Aldersyde, Milton of Campsie.
 H No. 122 Munro, Charles A., Cantray Home Farm, Croy, Gollanfield,
 Inverness-shire.
 C No. 124 Russell, Thomas, Post Office, Pettinain, Lanark.

CLASS 32. SUSSEX—Cock.

- 1st No. 126 Morgan, William, Balcurvie, Windygates, Fife.
 2nd No. 128 White, James, Estate Overseer, Barras, Stonehaven.
 V No. 127 Ramsay, J., Sanquhar Kennels, Forres, Morayshire.

CLASS 33. SUSSEX—Hen.

- 1st No. 133 White, James, Estate Overseer, Barras, Stonehaven.
 2nd No. 129 Falconer, Captain A. H., Ballaggan, Gollanfield, Inverness-
 shire.

CLASS 34. SUSSEX—Cockerel.

No entries.

CLASS 35. SUSSEX—Pullet.

- 1st No. 134 Falconer, Captain A. H., Ballaggan, Gollanfield, Inverness-
 shire.

CLASS 36. DORKING—Cock.

- 1st No. 135 Bryce, William, Folda, Glenfarg, Perthshire.
 2nd No. 137 Fraser, John, Roslin, Auldearn, Nairn.

CLASS 37. DORKING—Hen.

- 1st No. 138 Bryce, William, Folda, Glenfarg, Perthshire.
 2nd No. 140 Gunn, Angus S., Glen-mavis House, Bathgate.
 V No. 139 Bryce, William, Folda, Glenfarg, Perthshire.

CLASS 38. DORKING—Cockerel or Pullet.

No entries.

CLASS 39. SCOTS DUMPY—Cock or Cockerel.

- 1st No. 143 Kerr, J. E., C.B.E., of Harviestoun, Dollar.
 2nd No. 144 Kerr, J. E., C.B.E., of Harviestoun, Dollar.
 3rd No. 142 Kerr, J. E., C.B.E., of Harviestoun, Dollar.
 C No. 141 Brown, J. W., Rosehill, Summerston, Glasgow, N.W.
 C No. 146 Murdoch, James, Cuil Farm, Aberfeldy.

CLASS 40. SCOTS DUMPY—Hen or Pullet.

- 1st No. 150 Kerr, J. E., C.B.E., of Harviestoun, Dollar.
 2nd No. 151 Murdoch, James, Cuil Farm, Aberfeldy.
 3rd No. 148 Kerr, J. E., C.B.E., of Harviestoun, Dollar.
 V No. 152 Murdoch, James, Cuil Farm, Aberfeldy.
 C No. 149 Kerr, J. E., C.B.E., of Harviestoun, Dollar.

CLASS 41. BARNEVELDER—Cock.

- 1st No. 153 Binnie, W., & Son, Wester Garth, Denny.
 2nd No. 156 Ritchie, Duncan, Mill of Haldane, Balloch, Dumbartonshire.
 3rd No. 154 Binnie, W., & Son, Wester Garth, Denny.
 C No. 155 Luke, J. A., Bona Lodge, Aldourie, Inverness.

CLASS 42. BARNEVELDER—Hen.

- 1st No. 157 Binnie, W., & Son, Wester Garth, Denny.

CLASS 43. BARNEVELDER—Cockerel or Pullet.

- 1st No. 158 Binnie, W., & Son, Wester Garth, Denny.

CLASS 44. INDIAN GAME—Cock or Cockerel.

- 1st No. 160 Lindsay, Robert, Windygates, Fife.
 2nd No. 159 Catto, Adam, Poultry Yards, Newmachar, Aberdeenshire.

CLASS 45. INDIAN GAME—Hen or Pullet.

- 1st No. 165 Lindsay, Robert, Windygates, Fife.
 2nd No. 163 Gunn, Angus S., Glen-mavis House, Bathgate.
 3rd No. 161 Catto, Adam, Poultry Yards, Newmachar, Aberdeenshire.
 V No. 166 Ramsay, J., Sanquhar Kennels, Forres, Morayshire.
 C No. 162 Catto, Adam, Poultry Yards, Newmachar, Aberdeenshire.
 C No. 164 Hamilton, Thomas, Kirkton Kilns, Bathgate.

CLASS 46. OLD ENGLISH GAME—Cock.

- 1st No. 167 Hartley, J. H., Holme Gate, Houghton, Carlisle.
 2nd No. 169 Telford, William, Breconside, Brampton, Cumberland.

CLASS 47. OLD ENGLISH GAME—Hen.

- 1st No. 170 Hartley, J. H., Holme Gate, Houghton, Carlisle.
2nd No. 172 Telford, William, Breconside, Brampton, Cumberland.

CLASS 48. OLD ENGLISH GAME—Cockerel.

- 1st No. 173 Hartley, J. H., Holme Gate, Houghton, Carlisle.

CLASS 49. OLD ENGLISH GAME—Pullet.

- 1st No. 174 Hartley, J. H., Holme Gate, Houghton, Carlisle.

CLASS 50. BANTAM—Game—Old English Spangle—Cock.

- 1st No. 176 Hartley, J. H., Holme Gate, Houghton, Carlisle.
2nd No. 177 Morgan, William, Balcurvie, Windygates, Fife.
3rd No. 175 Clark, A. Atkinson, Norwood, Lockerbie.
V No. 178 Templeton, G., Knowe, Auchinleck, Ayrshire.

CLASS 51. BANTAM—Game—Old English Spangle—Hen.

- 1st No. 179 Hartley, J. H., Holme Gate, Houghton, Carlisle.
2nd No. 180 Morgan, William, Balcurvie, Windygates, Fife.
V No. 181 Templeton, G., Knowe, Auchinleck, Ayrshire.

CLASS 52. BANTAM—Game—Old English, any other Colour—Cock.

- 1st No. 186 Walton, Tom S., Dalston, Carlisle.
2nd No. 183 Hartley, J. H., Holme Gate, Houghton, Carlisle.
3rd No. 184 Morgan, William, Balcurvie, Windygates, Fife (Black-Red).
V No. 182 Duncan, William, Tilework House, Ochiltree (Blue).
C No. 185 Templeton, G., Knowe, Auchinleck, Ayrshire (Silver Duck-wing).

CLASS 53. BANTAM—Game—Old English, any other Colour—Hen.

- 1st No. 187 Hartley, J. H., Holme Gate, Houghton, Carlisle.
2nd No. 191 Templeton, G., Knowe, Auchinleck, Ayrshire.
3rd No. 189 Morgan, William, Balcurvie, Windygates, Fife (Wheaten).
V No. 192 Walton, Tom S., Dalston, Carlisle.
C No. 190 Telford, William, Breconside, Brampton, Cumberland.

CLASS 54. BANTAM—Game—Modern—Cock.

- 1st No. 194 Delaney, James, & Son, Gateside, Fife.
2nd No. 193 Cathcart, James, Dunavon Kennels, Quarter, Hamilton.
3rd No. 195 Hartley, J. H., Holme Gate, Houghton, Carlisle.
V No. 197 Meikle, John, Airbles House, Motherwell.
C No. 196 Rugg, John, Linderlis, Kirriemuir, Angus.

CLASS 55. BANTAM—Game—Modern—Hen.

- 1st No. 201 Meikle, John, Airbles House, Motherwell.
 2nd No. 198 Cathcart, James, Dunavon Kennels, Quarter, Hamilton.
 3rd No. 200 Hartley, J. H., Holme Gate, Houghton, Carlisle.
 V No. 202 Rugg, John, Linderlis, Kirriemuir, Angus.
 C No. 199 Delaney, James, & Son, Gateside, Fife.

CLASS 56. BANTAM—Old English or Game—Cockerel or Pullet.

- 1st No. 203 Cathcart, James, Dunavon Kennels, Quarter, Hamilton.
 2nd No. 204 Hartley, J. H., Holme Gate, Houghton, Carlisle.
 3rd No. 207 Morgan, William, Balcurvie, Windygates, Fife.

CLASS 57. BANTAM—Rhode Island Red—Cock.

- 1st No. 210 M'Gregor, James, Badshalloch, Alexandria.
 2nd No. 211 Mitchell, W. G., Market Square, Melrose.
 3rd No. 209 M'Gregor, James, Badshalloch, Alexandria.
 V No. 213 Shewan, Alexander, Mullochard, Grantown-on-Spey.
 C No. 212 Penny, J. G., Sauchie Poultry Farm, Crieff.

CLASS 58. BANTAM—Rhode Island Red—Hen.

- 1st No. 218 Wardrop, Thomas D., Woodland, Girvan.
 2nd No. 219 Wardrop, Thomas D., Woodland, Girvan.
 3rd No. 215 Campbell, Sam M., Low Lann, Tynron, Dumfriesshire.
 V No. 217 Penny, J. G., Sauchie Poultry Farm, Crieff.
 C No. 214 Alexander, James, Grangepeel, Busby, Glasgow.
 C No. 216 M'Gregor, James, Badshalloch, Alexandria.

CLASS 59. BANTAM—Wyandotte—Cock.

- 1st No. 223 Morgan, William, Balcurvie, Windygates, Fife.
 2nd No. 220 Binnie, W., & Son, Wester Garth, Denny.
 3rd No. 225 Williamson, James, East Lochran, Blairadam, Kelty.
 V No. 226 Williamson, James, East Lochran, Blairadam, Kelty.
 C No. 221 Duncan, William, Tilework House, Ochiltree.
 C No. 222 Hornal, James, Viewfield Cottage, Quarter, Hamilton.

CLASS 60. BANTAM—Wyandotte—Hen.

- 1st No. 227 Binnie, W., & Son, Wester Garth, Denny.
 2nd No. 232 Hornal, James, Viewfield Cottage, Quarter, Hamilton.
 3rd No. 235 Williamson, James, East Lochran, Blairadam, Kelty.
 V No. 234 Williamson, James, East Lochran, Blairadam, Kelty.
 C No. 233 Penny, J. G., Sauchie Poultry Farm, Crieff.

CLASS 61. BANTAM—Plymouth Rock or Scotch Grey—Cock.

- 1st No. 239 Kerr, J. E., C.B.E., of Harviestoun, Dollar (Scotch Grey).
 2nd No. 241 M'Gillivray, J., Aldersyde, Milton of Campsie (Barred Rock).
 3rd No. 237 Dixon, Miss E. A., Ledcameroch, Dunblane (Plymouth Rock).
 V No. 238 Dixon, Miss E. A., Ledcameroch, Dunblane (Plymouth Rock).
 C No. 240 Kerr, J. E., C.B.E., of Harviestoun, Dollar (Scotch Grey).

CLASS 62. BANTAM—Plymouth Rock or Scotch Grey—Hen.

- 1st No. 246 Kerr, J. E., C.B.E., of Harviestoun, Dollar (Scotch Grey).
 2nd No. 245 Dixon, Miss E. A., Ledcameroch, Dunblane (Plymouth Rock).
 3rd No. 247 Kerr, J. E., C.B.E., of Harviestoun, Dollar (Scotch Grey).
 V No. 248 M'Ghee, William, Eilean Shona, Acharoch, Argyll (Barred Rock).

CLASS 63. BANTAM—Sebright—Cock.

- 1st No. 254 Watson, A. C., Gilmerton Dairy, Edinburgh 9.
 2nd No. 253 Watson, A. C., Gilmerton Dairy, Edinburgh 9.
 3rd No. 252 Watson, A. C., Gilmerton Dairy, Edinburgh 9.
 V No. 250 Clark, George, 453 Cambusnethan Street, Wishaw.

CLASS 64. BANTAM—Sebright—Hen.

- 1st No. 260 Watson, A. C., Gilmerton Dairy, Edinburgh 9.
 2nd No. 259 Watson, A. C., Gilmerton Dairy, Edinburgh 9.
 3rd No. 258 Watson, A. C., Gilmerton Dairy, Edinburgh 9.
 V No. 256 Russell, Thomas, Post Office, Pettinain, Lanark.
 C No. 255 Clark, George, 453 Cambusnethan Street, Wishaw.

CLASS 65. BANTAM—Any Variety other than Game—Cockerel or Pullet.

- 1st No. 261 Binnie, W., & Son, Wester Garth, Denny (White Wyandotte).

CLASS 66.. ANY OTHER RECOGNISED BREED OF POULTRY—Cock.

- 1st No. 267 Jackson, R., Meadowbank, Alloway, Ayr (Cochin, Partridge).
 2nd No. 266 Hamilton, Thomas, Kirkton Kilns, Bathgate (Brahma).
 3rd No. 265 Boyle, Hon. Patrick, Glendelvine, Murthly, Perthshire (White Silkie).

CLASS 67. ANY OTHER RECOGNISED BREED OF POULTRY—Hen.

- 1st No. 270 Hamilton, Thomas, Kirkton Kilns, Bathgate (Brahma).
 2nd No. 271 Jackson, R., Meadowbank, Alloway, Ayr (Cochin, Partridge).
 3rd No. 269 Boyle, Hon. Patrick, Glendelvine, Murthly, Perthshire (White Silkie).

CLASS 68. ANY OTHER RECOGNISED BREED OF POULTRY—Cockerel.

No entries.

CLASS 69. ANY OTHER RECOGNISED BREED OF POULTRY—Pullet.

No entries.

UTILITY POULTRY.

CLASS 70. LEGHORN—Any Variety—Cock or Cockerel.

- 1st No. 273 Binnie, W., & Son, Wester Garth, Denny (White Leghorn).
 2nd No. 282 Smith, Alexander, 8 Orchard Place, Aberdeen (Black Leghorn).
 3rd No. 278 Munro, Charles A., Cantray Home Farm, Croy, Gollanfield, Inverness-shire (Brown Leghorn).
 V No. 281 Ross, Francis, Mannachie Farm, Forres, Morayshire (Brown Leghorn).
 C No. 277 Guthrie, Peter F., Southcroft, Auchterarder, Perthshire (White Leghorn).
 C No. 279 Rose, Charles, Elderslie Poultry Farm, Inshes, Inverness (Black Leghorn).
 C No. 280 Rose, Charles, Elderslie Poultry Farm, Inshes, Inverness (Black Leghorn).

CLASS 71. WYANDOTTE—Any Colour—Cock or Cockerel.

- 1st No. 289 M'Gregor, James, Badshalloch, Alexandria (White).
 2nd No. 286 Duncan, William, Tilework House, Ochiltree (White).
 3rd No. 288 Lyle, Lady, Glendelvine, Murthly, Perthshire (White).
 V No. 284 Binnie, W., & Son, Wester Garth, Denny (White).
 C No. 285 Cowieson, J. T., Pitmedden Poultry Farm, Udny, Aberdeen-shire (White).
 C No. 287 Falconer, Captain A. H., Ballaggan, Gollanfield, Inverness-shire (White).
 C No. 292 Shewan, Alexander, Mullochard, Grantown-on-Spey.

CLASS 72. RHODE ISLAND RED—Cock or Cockerel.

- 1st No. 300 Morgan, William, Balcurvie, Windygates, Fife.
 2nd No. 310 White, John Henry, Larchwood, Waitknowe Terrace, Galashiels.
 3rd No. 305 Rugg, John, Linderlis, Kirriemuir, Angus.
 V No. 294 Campbell, Sam M., Low Lann, Tynron, Dumfriesshire.
 C No. 299 Mitchell, W. G., Market Square, Melrose.
 C No. 301 Munro, Charles A., Cantray Home Farm, Croy.
 C No. 306 Shaw, Robert, Tomnarroch Farm, Glenferness, Nairn.

CLASS 73. ANY OTHER VARIETY—Heavy Breed—Cock or Cockerel.

- 1st No. 311 Binnie, W., & Son, Wester Garth, Denny (Orpington).
 2nd No. 315 Mackenzie, C. & D., Ballygown, Torloisk, Isle of Mull (Australorp).
 3rd No. 313 Fraser, John, Roslin, Auldearn, Nairn (Dorking).
 C No. 316 Ross, Francis, Mannachie Farm, Forres, Morayshire (Light Sussex).

CLASS 74. LEGHORN—White—Hen or Pullet.

- 1st No. 317 Binnie, W., & Son, Wester Garth, Denny.
- 2nd No. 324 Stone, Mrs C. V., The Plaids, Tain, Ross-shire.
- 3rd No. 321 M'Gregor, James, Badshalloch, Alexandria.
- V No. 319 Guthrie, Peter F., Southcroft, Auchterarder, Perthshire.
- C No. 320 Guthrie, Peter F., Southcroft, Auchterarder, Perthshire.
- C No. 322 Shewan, Alexander, Mullochard, Grantown-on-Spey.
- C No. 323 Stone, Mrs C. V., The Plaids, Tain, Ross-shire.

CLASS 75. LEGHORN—Any other Colour—Hen or Pullet.

- 1st No. 335 Williamson, James, East Lochran, Blairadam, Kelty (Black).
- 2nd No. 329 M'Ghee, William, Eilean Shona, Acharoch, Argyll (Black).
- 3rd No. 334 Russell, Thomas, Post Office, Pettinain, Lanark (White).
- V No. 328 M'Ghee, William, Eilean Shona, Acharoch, Argyll (Black).
- C No. 325 Aitken, George, Hilliesland Poultry Farm, Hawick (Brown).
- C No. 330 Penny, J. G., Sauchie Poultry Farm, Crieff (Black).
- C No. 333 Ross, Francis, Mannachie Farm, Forres, Morayshire (Brown).

CLASS 76. WYANDOTTE—Any Colour—Hen or Pullet.

- 1st No. 336 Binnie, W., & Son, Wester Garth, Denny (White).
- 2nd No. 338 Duncan, William, Tilework House, Ochiltree (White).
- 3rd No. 340 Lyle, Lady, Glendelvine, Murthly, Perthshire (White).
- V No. 342 Russell, Thomas, Post Office, Pettinain, Lanark (White).
- C No. 337 Cowieson, J. T., Pitmedden Poultry Farm, Udney, Aberdeenshire (White).
- C No. 339 Falconer, Captain A. H., Ballaggan, Gollanfield, Inverness-shire (White).
- C No. 341 M'Gregor, James, Badshalloch, Alexandria (White).

CLASS 77. RHODE ISLAND RED—Hen or Pullet.

- 1st No. 349 Morgan, William, Balcurvie, Windygates, Fife.
- 2nd No. 351 Penny, J. G., Sauchie Poultry Farm, Crieff.
- 3rd No. 355 Rugg, John, Linderlis, Kirriemuir, Angus.
- V No. 359 White, John Henry, Larchwood, Waitknowe Terrace, Galashiels.
- C No. 346 Falconer, Captain A. H., Ballaggan, Gollanfield, Inverness-shire.
- C No. 347 Mackenzie, C. & D., Ballygown, Torloisk, Isle of Mull.
- C No. 358 Stone, Mrs C. V., The Plaids, Tain, Ross-shire.

CLASS 78. BARNEVELDER—Hen or Pullet.

- 1st No. 360 Binnie, W., & Son, Wester Garth, Denny.

CLASS 79. ROCK—Any Colour—Hen or Pullet.

No entries.

CLASS 80. WELSUMMER—Hen or Pullet.*No entries.***CLASS 81. ANY OTHER VARIETY—Hen or Pullet.**

- 1st No. 361 Binnie, W., & Son, Wester Garth, Denny (Minorca).
 2nd No. 367 Ross, Francis, Mannachie Farm, Forres, Morayshire (Light Sussex).
 3rd No. 362 Douglas-Hamilton, Lord Malcolm, O.B.E., D.F.C., Cullerne House, Findhorn, Morayshire (Light Sussex).
 V No. 366 Munro, Charles A., Cantray Home Farm, Croy, Gollanfield, Inverness-shire (Light Sussex).
 C No. 364 Grant, W. J., Aldroughty, Elgin, Moray (Light Sussex).

CLASS 82. ANY CROSS FOR LAYING PURPOSES—Hen.

- 1st No. 371 Grant, W. J., Aldroughty, Elgin, Moray (Brown Leghorn—Light Sussex).
 2nd No. 370 Glencross, James H., 26 Garry Park, Glencraig, Fife.

CLASS 83. ANY CROSS FOR LAYING PURPOSES—Pullet.

- 1st No. 373 Grant, W. J., Aldroughty, Elgin, Moray (Brown Leghorn—Light Sussex).
 2nd No. 372 Glencross, James H., 26 Garry Park, Glencraig, Fife.
 V No. 374 Munro, Charles A., Cantray Home Farm, Croy, Gollanfield, Inverness-shire (Brown Leghorn—Sussex).

CLASS 84. DUCKS—Aylesbury—Drake.

- 1st No. 377 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 2nd No. 375 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 3rd No. 376 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 V No. 378 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 C No. 379 Shewan, Alexander, Mullochard, Grantown-on-Spey.

CLASS 85. DUCKS—Aylesbury—Duck.

- 1st No. 381 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 2nd No. 380 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 3rd No. 382 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 V No. 383 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 C No. 384 Shewan, Alexander, Mullochard, Grantown-on-Spey.

CLASS 86. DUCKS—Aylesbury—Drake or Duck (young).

- 1st No. 385 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 2nd No. 388 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 3rd No. 386 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 V No. 387 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 C No. 389 Lyle, Lady, Glendelvine, Murthly, Perthshire.

CLASS 87. DUCKS—Orpington—Drake.

- 1st No. 390 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 2nd No. 391 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 V No. 392 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

CLASS 88. DUCKS—Orpington—Duck.

- 1st No. 393 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 2nd No. 394 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 V No. 395 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

CLASS 89. DUCKS—Orpington—Drake or Duck (young).

- 1st No. 398 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 2nd No. 397 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 V No. 396 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.

CLASS 90. DUCKS—Indian Runner—Drake.

- 1st No. 399 Argo, Harry L., North Flobbets, St Katherine's, Aberdeenshire.
 2nd No. 403 Shewan, Alexander, Mullochard, Grantown-on-Spey.
 3rd No. 401 Laurie, Mrs Elizabeth, Kettlestoun Mains, Linlithgow.
 V No. 402 Shaw, Robert, Tomnarroch Farm, Glenferness, Nairn.
 C No. 400 Laurie, Mrs Elizabeth, Kettlestoun Mains, Linlithgow.

CLASS 91. DUCKS—Indian Runner—Duck.

- 1st No. 407 Shaw, Robert, Tomnarroch Farm, Glenferness, Nairn.
 2nd No. 408 Shaw, Robert, Tomnarroch Farm, Glenferness, Nairn.
 3rd No. 404 Argo, Harry L., North Flobbets, St Katherine's, Aberdeenshire.
 V No. 406 Laurie, Mrs Elizabeth, Kettlestoun Mains, Linlithgow.
 C No. 405 Hamilton, Thomas, Kirkton Kilns, Bathgate.

CLASS 92. DUCKS—Indian Runner—Drake or Duck (young).

- 1st No. 410 Argo, Harry L., North Flobbets, St Katherine's, Aberdeenshire.
 2nd No. 409 Argo, Harry L., North Flobbets, St Katherine's, Aberdeenshire.
 V No. 411 Laurie, Mrs Elizabeth, Kettlestoun Mains, Linlithgow.

CLASS 93. DUCKS—Any other Variety—Drake.

No entries.

CLASS 94. DUCKS—Any other Variety—Duck.

No entries.

CLASS 95. DUCKS—Any other Variety—Drake or Duck (young).*No entries.***CLASS 96. GEESE**—Gander.

- 1st No. 415 Shewan, Alexander, Mullochard, Grantown-on-Spey.
 2nd No. 416 Shewan, Alexander, Mullochard, Grantown-on-Spey.
 3rd No. 414 Luke, J. A., Bona Lodge, Aldourie, Inverness.
 V No. 412 Babington, Lieut.-Colonel G., Ascreavie, Kirriemuir.
 C No. 413 Babington, Lieut.-Colonel G., Ascreavie, Kirriemuir.

CLASS 97. GEESE—Goose.

- 1st No. 418 Shewan, Alexander, Mullochard, Grantown-on-Spey.
 2nd No. 419 Shewan, Alexander, Mullochard, Grantown-on-Spey.

CLASS 98. TURKEYS—Cock.

- 1st No. 421 Andrew, Mrs Jessie, South Tulloford, Old Meldrum.
 2nd No. 428 Paterson, Alexander, Crossfold Croft, Tarland, Aberdeenshire.
 3rd No. 422 Bruce, Mrs Edith, Hill of Chattie, Portsoy, Banffshire.
 V No. 420 Andrew, Mrs Jessie, South Tulloford, Old Meldrum.
 C No. 424 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream.
 C No. 427 Paterson, Alexander, Crossfold Croft, Tarland, Aberdeenshire.

CLASS 99. TURKEYS—Hen.

- 1st No. 435 Bruce, Mrs Edith, Hill of Chattie, Portsoy, Banffshire.
 2nd No. 434 Bruce, Mrs Edith, Hill of Chattie, Portsoy, Banffshire.
 3rd No. 436 M'Ghee, William, Eilean Shona, Acharoach, Argyll.
 V No. 433 Bain, Donald, Glebe Poultry Farm, Halkirk, Caithness.
 C No. 437 Paterson, Alexander, Crossfold Croft, Tarland, Aberdeenshire.
 C No. 439 Shewan, Alexander, Mullochard, Grantown-on-Spey.

TABLE POULTRY.**CLASS 100. ANY PURE BREED**—Cock.

- 1st No. 441 Catto, Adam, Poultry Yards, Newmachar, Aberdeenshire (Indian Game).
 2nd No. 440 Binnie, W., & Son, Wester Garth, Denny (White Wyandotte).

CLASS 101. ANY PURE BREED—Cockerel.

- 1st No. 442 Binnie, W., & Son, Wester Garth, Denny (White Wyandotte).
 2nd No. 444 Grant, W. J., Aldroughty, Elgin, Moray (Sussex).
 V No. 443 Grant W. J., Aldroughty, Elgin, Moray (Light Sussex).

CLASS 102. ANY CROSS—Cock.

No entries.

CLASS 103. ANY CROSS—Cockerel.

- 1st No. 449 Huntly, James, & Son, Hirsell Poultry Farm, Coldstream
(Rhode Island Red—Sussex).
- 2nd No. 448 Grant, W. J., Aldroughty, Elgin, Moray (Brown Leghorn—
Light Sussex).
- 3rd No. 446 Glencross, James H., 26 Garry Park, Glencraig, Fife (Sussex
—Leghorn).
- V No. 447 Grant, W. J., Aldroughty, Elgin, Moray (Brown Leghorn—
Light Sussex).
- C No. 445 Catto, Adam, Poultry Yards, Newmachar, Aberdeenshire
(Light Sussex—Indian Game).

**CLASS 104. ANY PURE BREED OR CROSS—
Pair of Pullets.**

- 1st No. 450 Catto, Adam, Poultry Yards, Newmachar, Aberdeenshire
(Indian Game).
- 2nd No. 451 Grant, W. J., Aldroughty, Elgin, Moray (Light Sussex).

DAIRY PRODUCE.

CLASS 1. POWDERED BUTTER, not less than 2 lb.— PREMIUMS, £4, £3, £2, and £1.

- 1st No. 3 M'Gregor, Miss Margaret, South Bellyeoman Farm, Dunfermline.
 2nd No. 7 Shanks, Miss, Broomhill, Denny, Stirlingshire.
 3rd No. 5 Mundell, Miss M., Dalilongart, Sandbank, Argyll.
 4th No. 6 Ramage, Mrs James, Lathallan Dairy, Polmont, Falkirk.

CLASS 2. FRESH BUTTER, two 1-lb. lots, to be made up in form of bricks, *without any prints*.—PREMIUMS, £4, £3, £2, and £1.

- 1st No. 12 M'Gregor, Miss Margaret, South Bellyeoman Farm, Dunfermline.
 2nd No. 20 Shanks, Miss, Broomhill, Denny, Stirlingshire.
 3rd No. 19 Ross, T., Dalchork Dairy, Lairg.
 4th No. 18 Ross, Mrs M., Dalchork Dairy, Lairg.
 V No. 10 Laurie, Mrs Elizabeth, Kettlestoun Mains, Linlithgow.
 H No. 13 MacKellar, Mrs, Raehills Home Farm, Lockerbie.
 C No. 14 MacKenzie, Mrs A. W., Upper Tullochgrue, Aviemore, Inverness-shire.
 C No. 16 Mundell, Miss M., Dalilongart, Sandbank, Argyll.

CLASS 3. CHEDDAR CHEESE, 56 lb. and upwards.— PREMIUMS, £9, £5, £3, £2, and £1.

- 1st No. 23 Niven, John F., & Son, Mahaar, Kirkcolm, Stranraer.
 2nd No. 24 Ross, Thomas, Barnhills, Kirkcolm, Stranraer.
 3rd No. 22 Findlay, William, Cairnhaudry, Ardwell, Stranraer.

CLASS 4. CHEESE, 14 lb. and under.—PREMIUMS, £5, £3, £2, and £1.

- 1st No. 27 Niven, John F., & Son, Mahaar, Kirkcolm, Stranraer.
 2nd No. 25 Findlay, William, Cairnhaudry, Ardwell, Stranraer.
 3rd No. 28 Ross, Thomas, Barnhills, Kirkcolm, Stranraer.
 4th No. 29 Wood, Mrs C. H. F., Gollanfield House, Gollanfield, Inverness-shire.

HONEY, &c.

OPEN CLASSES.

Empire Exhibition Perpetual Challenge Cup. Presented by the Scottish Beekeepers' Association. *To be competed for annually at the Highland and Agricultural Society's Show, and awarded to the competitor gaining most points in the Classes for Honey and Wax only, calculated on the following basis: 1st prize, 3 points; 2nd prize, 2 points; 3rd prize, 1 point. In the event of a tie, the competitor having most first prizes to be adjudged the winner.*

Anderson, Gordon, Home Farm, Mayne, Elgin (15 points).

Silver and Bronze Medals awarded by the Scottish Beekeepers' Association *to the First and Second winners of the greatest number of points in the Classes for Honey and Wax only, calculated on the following basis: 1st prize, 3 points; 2nd prize, 2 points; 3rd prize, 1 point.*

Silver Medal—Anderson, Gordon, Home Farm, Mayne, Elgin (15 points).

Bronze Medal—Scott, George, Waterton, 84 Ayr Road, Cumnock (13 points).

CLASS 1. Collection of APPLIANCES suitable for a beginner's outfit for Beekeeping. A card naming all the articles, along with the price at which they will be supplied for one year from date, to be fixed to the exhibit.—PREMIUMS, 20s., 15s., and 10s.

1st No. 2 Steele, R., & Brodie, Wormit Works, Wormit, Fife.

CLASS 2. Best and most complete FRAME HIVE for general use, with any improvements. Unpainted.—PREMIUMS, 20s., 15s., and 10s.

1st No. 5 Scottish Beehives, Ltd., 18 Mill Street, Perth.

2nd No. 6 Steele, R., & Brodie, Wormit Works, Wormit, Fife.

3rd No. 3 Cumming, A. R., 89 Culduthel Road, Inverness.

CLASS 3. Best and most complete HIVE. Unpainted. Price not to exceed 70s.—PREMIUMS, 20s., 15s., and 10s.

1st No. 9 Scottish Beehives, Ltd., 18 Mill Street, Perth.

2nd No. 8 Garrow, William, Upper Tullochgrue, Rothiemurchus, Aviemore.

3rd No. 10 Steele, R., & Brodie, Wormit Works, Wormit, Fife.

C No. 7 Cumming, A. R., 89 Culduthel Road, Inverness.

CLASS 4. Four Sections of COMB HONEY, excluding Heather Honey.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 14 Mackay, D., Dunn, Watten, Caithness.
 2nd No. 13 M'Donald, R. A., Low Hallidayhill, Auldgirth, Dumfries.
 3rd No. 11 Anderson, Gordon, Home Farm, Mayne, Elgin.

CLASS 5. Four Sections of HEATHER HONEY.—
 PREMIUMS, 20s., 15s., and 10s.

- 1st No. 18 Rutherford, F. J., Flodden Cottage, Cornhill-on-Tweed,
 Northumberland.
 2nd No. 17 Anderson, Gordon, Home Farm, Mayne, Elgin.

CLASS 6. Four Jars of RUN or EXTRACTED LIGHT-COLOURED HONEY, approximate weight 4 lb.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 26 Scott, George, Waterton, 84 Ayr Road, Cumnock.
 2nd No. 23 M'Donald, R. A., Low Hallidayhill, Auldgirth, Dumfries.
 3rd No. 25 Rutherford, F. J., Flodden Cottage, Cornhill-on-Tweed,
 Northumberland.

CLASS 7. Four Jars of RUN or EXTRACTED MEDIUM or DARK-COLOURED HONEY, excluding Heather Honey, approximate weight 4 lb.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 30 Edmondson, R., Rothay, 406 Hale Road, Ringway, Altrincham.
 2nd No. 36 Scott, J., Corrour, Ladybank, Fife.
 3rd No. 35 Scott, George, Waterton, 84 Ayr Road, Cumnock.

CLASS 8. Four Jars of PRESSED HEATHER HONEY in liquid form, approximate weight 4 lb.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 40 Rutherford, F. J., Flodden Cottage, Cornhill-on-Tweed,
 Northumberland.
 2nd No. 41 Scott, George, Waterton, 84 Ayr Road, Cumnock.
 3rd No. 37 Anderson, Gordon, Home Farm, Mayne, Elgin.

CLASS 9. Four Jars of GRANULATED HONEY, approximate weight 4 lb.—PREMIUMS, 20s., 15s., and 10s.

- 1st No. 44 Aitken, George S., Coldwells Cottage, Bogmuchals, Portsoy,
 Banffshire.
 2nd No. 55 Maunsell-Thomas, Mrs, The Drum, Nairn.
 3rd No. 49 Ferguson, George, Monaughty, Alves, Forres.
 C No. 51 Gordon, P. M., Sunnyside, Freuchie, Fife.

CLASS 10. One shallow Frame of COMB HONEY for extracting purposes.—PREMIUMS, 20s., 15s., and 10s.

- 2nd No. 60 Anderson, Gordon, Home Farm, Mayne, Elgin.

CLASS 11. Best display of HONEY in any form suitable for a shop window in space 4 feet by 4 feet. Weight of honey not to exceed 30 lb.—PREMIUMS, 60s., 30s., and 20s.

1st No. 68 Anderson, Gordon, Home Farm, Mayne, Elgin.

CLASS 12. Best exhibit of not less than 1 lb. of WAX in any form.
—PREMIUMS, 20s., 15s., and 10s.

1st No. 78 Peterkin, Miss Alison Bruce, The Parsonage, Aberarder, Inverness.

2nd No. 80 Rutherford, F. J., Flodden Cottage, Cornhill-on-Tweed, Northumberland.

3rd No. 77 M'Donald, R. A., Low Hallidayhill, Auldgrith, Dumfries.

V No. 70 Anderson, Gordon, Home Farm, Mayne, Elgin.

H No. 75 M'Donald, R. A., Low Hallidayhill, Auldgrith, Dumfries.

C No. 72 Forsyth, James, & Son, Pilmuir Villa, Forres.

C No. 73 Lockie, George, Boleside, Galashiels.

C No. 76 M'Donald, R. A., Low Hallidayhill, Auldgrith, Dumfries.

CLASS 13. Best exhibit of not less than 1 lb. of WAX made into shapes for retail trade and over-counter trade. Convenience in packing to be taken into consideration.—PREMIUMS, 20s., 15s., and 10s.

1st No. 84 Rutherford, F. J., Flodden Cottage, Cornhill-on-Tweed, Northumberland.

2nd No. 82 Lockie, George, Boleside, Galashiels.

3rd No. 83 M'Donald, R. A., Low Hallidayhill, Auldgrith, Dumfries.

C No. 81 Anderson, Gordon, Home Farm, Mayne, Elgin.

CLASS 14. OBSERVATORY HIVE, with Queen and Bees—two or more frames.—PREMIUMS, 50s., 30s., and 20s.

No entries.

CLASS 15. OBSERVATORY HIVE, with Queen and Bees—one frame, no super.—PREMIUMS, 40s., 30s., and 15s.

No entries.

CONFINED TO SCOTTISH EXHIBITORS.

CLASS 16. One Standard Frame of COMB HONEY for extracting purposes.—PREMIUMS, 20s., 15s., and 10s.

None forward.

CLASS 17. Four Sections of COMB HONEY, excluding Heather Honey.—PREMIUMS, 20s., 15s., and 10s.

1st No. 93 Mackay, D., Dunn, Watten, Caithness.

2nd No. 92 M'Donald, R. A., Low Hallidayhill, Auldgrith, Dumfries.

3rd No. 89 Aitken, George S., Coldwells Cottage, Bogmunchals, Portsoy, Banffshire.

CLASS 18. Four Sections of HEATHER HONEY.—
PREMIUMS, 30s., 20s., and 10s.

1st No. 95 Aitken, George S., Coldwells Cottage, Bogmuchals, Portsoy,
Banffshire.

2nd No. 96 Anderson, Gordon, Home Farm, Mayne, Elgin.

CLASS 19. Four Jars of RUN or EXTRACTED MEDIUM or DARK-
COLOURED HONEY, excluding Heather Honey, approximate
weight 4 lb.—PREMIUMS, 30s., 20s., and 10s.

1st No. 102 Cant, William A., Laurenceton, Forres.

2nd No. 100 Aitken, George S., Coldwells Cottage, Bogmuchals, Portsoy,
Banffshire.

3rd No. 110 Scott, George, Waterton, 84 Ayr Road, Cumnock.

CLASS 20. Four Jars of PRESSED HEATHER HONEY in liquid
form, approximate weight 4 lb.—PREMIUMS, 20s., 15s., and 10s.

1st No. 118 Scott, George, Waterton, 84 Ayr Road, Cumnock.

2nd No. 113 Anderson, Gordon, Home Farm, Mayne, Elgin.

3rd No. 114 Ferguson, George, Monaghty, Alves, Forres.

CLASS 21. Four Jars of RUN or EXTRACTED LIGHT-COLOURED
HONEY, approximate weight 4 lb.—PREMIUMS, 30s., 20s., and 10s.

1st No. 132 Scott, George, Waterton, 84 Ayr Road, Cumnock.

2nd No. 122 Anderson, Gordon, Home Farm, Mayne, Elgin.

3rd No. 129 Maunsell-Thomas, Mrs, The Drum, Nairn.

V No. 121 Aitken, George S., Coldwells Cottage, Bogmuchals, Portsoy,
Banffshire.

RURAL INDUSTRIES.

OPEN CLASSES.

SHETLAND KNITTING.

Exhibits to be made from Shetland Wool.

CLASS 1. FINE LACE SHAWL or SCARF.— PREMIUMS, £3, £2, and £1.

- 1st No. 15 Peterson, Mrs Mary J., Toft, Muness, Uyeasound, Lerwick (Scarf).
- 2nd No. 7 Henderson, Miss Christina E., Midayre, Uyeasound, Lerwick (Shawl).
- 3rd No. 13 Jamieson, Miss Margaret, Gerriegarth, Baltasound, Lerwick (Shawl).
- V No. 19 Sinclair, Mrs Jemima G., Midayre, Uyeasound, Lerwick (Scarf).
- H No. 4 Cluness, Mrs Euphemia, Eastside, Uyeasound, Lerwick (Scarf).
- C No. 12 Jamieson, Miss Margaret, Gerriegarth, Baltasound, Lerwick (Scarf).
- C No. 20 Sutherland, Miss Joan, Ark, Haroldswick, Lerwick (Scarf).

CLASS 2. FINE LACE GOODS OTHER THAN ABOVE.— PREMIUMS, £3, £2, and £1.

- 1st No. 31 Morrison, Mrs Joan L., Ireland, Bigton, Lerwick (Jumper).
- 2nd No. 32 Mullay, Mrs Malcolm, Lochend, Bigton, Lerwick (Cardigan).
- 3rd No. 39 Young, Miss Netta, North House, Virkie, Shetland (Cardigan).
- V No. 35 Peterson, Mrs Joan, Laxfirth, Brettabister, North Nesting, Shetland (Jumper).
- H No. 29 Johnson, Miss J. M., Scatness, Virkie, Shetland (Jumper).
- C No. 22 Burgess, Mrs Joan M., Braes, Bigton, Lerwick (Jumper).
- C No. 34 Nicolson, Mrs John B., Muness, Uyeasound, Lerwick (Cardigan).

CLASS 3. JUMPER or CARDIGAN—with or without sleeves.— PREMIUMS, £3, £2, and £1.

- 1st No. 65 Henderson, Miss Annie, Beauna-Vista, Levenwick, Shetland.
- 2nd No. 42 Anderson, Miss Margaret H., Haroldswick, Unst, Lerwick.
- 3rd No. 66 Henry, Mrs Ethel, 14 Harbour Street, Lerwick.
- V No. 123 Robertson, Mrs Fred H., West Houlland, Bridge of Walls, Shetland.
- H No. 56 Duff, Miss Elizabeth M. W., 10 Whittet Drive, Elgin.
- C No. 41 Abernethy, Mrs G. W., Gerratown, Haroldswick, Lerwick.
- C No. 43 Anderson, Miss Margaret H., Haroldswick, Unst, Lerwick.

- C No. 51 Davidson, Miss Agnes, Mugator, Quarff, Lerwick.
 C No. 55 Duff, Miss Elizabeth M. W., 10 Whittet Drive, Elgin.
 C No. 92 Johnson, Mrs W. A., Hockland, Bixter, Lerwick.
 C No. 112 Peterson, Mrs Mary J., Toft, Muness, Uyeasound, Lerwick.
 C No. 115 Priest, Miss Mary, Mucklepund, Norwick, Haroldswick, Shetland.
 C No. 118 Ramsay, Mrs B. A., Houlland, North Roe, Lerwick.
 C No. 119 Ratter, Miss E. M., 11 Magnus Street, Lerwick.
 C No. 121 Robertson, Miss A. M., "Hoolsгарth," 24 St Olaf Street, Lerwick.
 C No. 127 Sharp, Miss Agnes J., Blythoid, Ollaberry, Lerwick.

CLASS 4. EXHIBITS OTHER THAN ABOVE.

—PREMIUMS, £2, £1, and 10s.

- 1st No. 169 Johnson, Mrs Mary A., Houlland, North Roe, Lerwick (Shawl).
 2nd No. 153 Halcrow, Miss Agnes J., Dykes, Cunningsburgh, Shetland (Gloves).
 3rd No. 165 Johnson, Miss Margaret A., North Tulkie, Sand, Garderhouse, Lerwick (Gloves).
 V No. 163 Johnson, Mrs E. J., Skibhoull, Baltasound, Shetland (Beret and Gloves).
 H No. 162 Johnson, Miss Agnes H., Ligg, Cunningsburgh, Shetland (Gloves).
 C No. 164 Halcrow, Miss Daisy, Aithsetter, Cunningsburgh, Shetland (Gloves).
 C No. 156 Halcrow, Miss Ruby, Aithsetter, Cunningsburgh, Shetland (Gloves).
 C No. 166 Johnson, Miss Margaret A., North Tulkie, Sand, Garderhouse, Lerwick (Mittens).
 C No. 168 Johnson, Mrs Mary A., Houlland, North Roe, Lerwick (Shawl).

TWEEDS.**CLASS 5. HARRIS or OTHER TWEED—Hand-woven.—**

PREMIUMS, £3, £2, and £1.

- 1st No. 196 MacInnes, Mrs Donald, 17 Portnalong, Portree.
 2nd No. 190 Crawford, Mrs A. W. E., Auchentroig Homespuns, Buchlyvie.
 3rd No. 202 Morrison, Mrs Mary Ann, Coolin, Tarbert, Harris.
 V No. 194 MacDonald, Mrs R., Drinishadder, Harris.
 H No. 191 Dickson, A. F., Benarty, Brora.
 C No. 189 Crawford, Mrs A. W. E., Auchentroig Homespuns, Buchlyvie.
 C No. 198 Mackie, Mrs M. A., Bank of Scotland House, Tarbert, Harris.
 C No. 203 Sutherland Technical School, Pupils of, Golspie.

CLASS 6. TARTAN—Vegetable-dyed and Hand-woven.—

PREMIUMS, £3, £2, and £1.

- 1st No. 204 Dickson, A. F., Benarty, Brora.
 2nd No. 205 Sutherland Technical School, Pupils of, Golspie.

CLASS 7. CARRIAGE RUG or PLAID—Hand-woven.—
PREMIUMS, £3, £2, and £1.

- 1st No. 206 Dickson, A. F., Benarty, Brora.
 2nd No. 207 Dickson, A. F., Benarty, Brora.

MISCELLANEOUS.

CLASS 8. HOOK-THROUGH FLOOR RUG (New Wool).—
PREMIUMS, £3, £2, and £1.

- 1st No. 217 Wilson, Miss M. A., Muircot, Tillicoultry.
 2nd No. 214 Robertson, Mrs John, 133 Station Road, Lochgelly, Fife.
 3rd No. 218 Wilson, Miss M. A., Muircot, Tillicoultry.
 V No. 213 MacRae, Frederick, 27 Ardconnel Terrace, Inverness.
 H No. 212 MacRae, Frederick, 27 Ardconnel Terrace, Inverness.
 C No. 210 MacDonald, Miss Bessie, Viaduct Vista, Culloden Moor,
 Inverness-shire.

CLASS 9. ANY OTHER VARIETY FLOOR RUG (New Wool).—
—PREMIUMS, £3, £2, and £1.

- 2nd No. 220 Black, Mrs Dora, Barwhillanty Farm, Parton, Castle Douglas.

CLASS 10. SPECIMEN OF WHITE EMBROIDERY—to be
exhibited unwashed.—PREMIUMS, £3, £2, and £1.

- 1st No. 221 Mackay, Miss Christina, The Clett, Castleton, Thurso (Cot
 Cover).
 2nd No. 222 M'Laren, Mrs Mary, Post Office, Ferniegair, Hamilton (Tea
 Cloth).

CLASS 11. SPECIMEN OF COLOURED EMBROIDERY—Silk
or Cotton (canvas work not eligible).—PREMIUMS, £3, £2, and £1.

- 1st No. 230 Irvine-Jones, Mrs A. M., The Old Manse, Rothiemurchus,
 Aviemore (Panel).
 2nd No. 245 Wilby, Miss Noel Macdonald, Regowan, Fortrose, Ross-shire
 (Mass Vestment).
 3rd No. 228 English, Mrs E., Middleton, Morpeth, Northumberland
 (Cushion Cover).
 H No. 240 Rae, Miss Jean C., 158 Dalrymple Street, Girvan (Tea Cloth).
 C No. 224 Carmichael, Miss Sara, Invershuna, Lochgilphead (Table
 Mats).

CLASS 12. SPECIMEN OF COLOURED EMBROIDERY—
Woolwork (canvas work not eligible).—PREMIUMS, £3, £2, and £1.

- 1st No. 253 Rae, Miss Jean C., 158 Dalrymple Street, Girvan (Panel).
 2nd No. 252 Orr, Mrs E. Rowley, Lednabra, Balforn, Stirlingshire (Panel).
 3rd No. 248 Doull, Miss Pearl, Quatre Bras, Lybster, Caithness (Cushion
 Cover).

CLASS 13. SPECIMEN OF OLD ENGLISH QUILTING.—
PREMIUMS, £3, £2, and £1.

- 1st No. 261 Stewart, Mrs J. C., Murdostoun Castle, Newmains, Lanarkshire (Quilt).
 2nd No. 258 English, Mrs E., Middleton, Morpeth, Northumberland (Cushion Cover).
 3rd No. 260 Mackay, Miss Christina, The Clett, Castletown, Thurso (Cushion).

CLASS 14. PAIR OF LEATHER GLOVES.—
PREMIUMS, £2, £1, and 10s.

- 1st No. 267 MacFarlane, Mrs E., 2 Cock Robin Cottages, Dunchurch Road, Rugby.
 2nd No. 268 MacFarlane, Mrs E., 2 Cock Robin Cottages, Dunchurch Road, Rugby.
 3rd No. 265 Gray-Cheape, Miss, Carse Gray, Forfar.

CLASS 15. SPECIMEN OF LEATHER WORK OTHER THAN GLOVES.—PREMIUMS, £2, £1, and 10s.

- 1st No. 276 Murray, Mrs Evelyn, Corriemoillie, Garve, Ross-shire (Hand Bag).
 2nd No. 274 MacLennan, Miss Alice, Corriemoillie Lodge, Garve, Ross-shire (Bag).
 3rd No. 277 Ross, John, "Calva," 44 Brook Street, Monifieth (Book Ends).
 H No. 273 MacKenzie, W., Corriemoillie Farm, Ross-shire (Cartridge Belt).
 C No. 272 MacKenzie, Mrs M., Corriemoillie Farm, Ross-shire (Hand Bag).

CLASS 16. SPECIMEN OF HAND-PAINTED POTTERY.—
PREMIUMS, £2, £1, and 10s.

- 1st No. 284 Jamieson, Ion C. B., Blakehope, Clovenfords, Galashiels (Jug).
 2nd No. 283 Jamieson, Ion C. B., Blakehope, Clovenfords, Galashiels (Jug).
 3rd No. 282 Grant, Miss B., Drumhead, Forneth, Blairgowrie (Sugar Bowl).

CLASS 17. SPECIMEN OF WOODCRAFT (small article).—
PREMIUMS, £3, £2, and £1.

- 1st No. 295 Nicholson, George, Bellevue, Tranent, East Lothian (Tea Tray).
 2nd No. 293 Murray, John D., Ardoch, Dunphail, Morayshire (Electric Lamp).
 3rd No. 291 M'Lellan, Peter, Dabton Gardens, Thornhill, Dumfriesshire (Picture).
 V No. 292 Murray, John D., Ardoch, Dunphail, Morayshire (Clock Cabinet).
 H No. 294 Nicholson, George, Bellevue, Tranent, East Lothian (Conductor's Baton).
 C No. 289 Chalmers, Miss Anne I., 4 Auchreddie Road, New Deer, Aberdeenshire (Box Lid).

CLASS 18. HOME-SPUN YARN—2·3 cuts.—
PREMIUMS, £2, £1, and 10s.

- 1st No. 310 Smith, Miss Dollina, Gunnister, Uyeasound, Lerwick.
- 2nd No. 299 Cheyne, Miss Barbara, Stapness, Walls, Shetland.
- 3rd No. 303 MacDonald, Mrs R., Drinishadder, Harris.
- V No. 309 Peterson, Mrs Mary J., Toft, Muness, Uyeasound, Lerwick.
- H No. 306 MacKenzie, Miss Catherine, Tor-na-Hulidhe, Gairloch, Ross-shire.
- C No. 311 Smith, Miss Dollina, Gunnister, Uyeasound, Lerwick.

CLASS 19. SPECIMEN OF HAND-MADE LACE other than
Crochet.—PREMIUMS, £3, £2, and £1.

- 1st No. 314 Chalmers, Miss Jessie C., Ulhalgoe House, Ulbster, Wick (Filet).
- 2nd No. 316 Mackay, Miss Christina, The Clett, Castletown, Thurso (Filet).
- 3rd No. 319 Sunter, Miss E., Mount Grange, Elie, Fife (Honiton).
- V No. 313 Chalmers, Miss Ann I., 4 Auchreddie Road, New Deer, Aberdeenshire (Needle-made).
- H No. 317 Murchie, Miss Winnie, 67 Russell Street, Ayr (Tatted).

CLASS 20. MEN'S GOLF OR KILT HOSE.—
PREMIUMS, £2, £1, and 10s.

- 1st No. 322 Duff, Mrs James, 20 Park Crescent, Scone.
- 2nd No. 323 Gibson, Mrs Mary, Balfunning, Balfron, Stirlingshire.
- 3rd No. 327 MacKay, Miss Morag I., Bayview, Tarbert, Harris.
- V No. 324 Gibson, Mrs Mary, Balfunning, Balfron, Stirlingshire.
- H No. 339 Rosher, Miss Barbara, 32 Castle Street, Duns, Berwickshire.
- C No. 334 MacPhail, Miss Christina, Minchview, Locheport, Isle of North Uist.
- C No. 337 Morrison, Mrs Mary Ann, Coolin, Tarbert, Harris.

CLASS 21. SHEPHERD'S CROOK, with horn handle, Hand-
made.—PREMIUMS, £2, £1, and 10s.

- 1st No. 347 M'Gregor, John, Mill of Bellamore, Dinnet, Aberdeenshire.
- 2nd No. 350 M'Nae, James, Glenmuick, Carsphairn, Castle Douglas.
- 3rd No. 343 Grant, David, Ladyward, Lockerbie.
- V No. 352 Scott, William James, Hartwoodmyres, Selkirk.
- H No. 348 M'Morran, William, Lochwood Cottage, Beattock.
- C No. 346 M'Cabe, Alexander, 67 Crown Street, Inverness.
- C No. 353 Scott, William James, Hartwoodmyres, Selkirk.

CLASS 22. SHEPHERD'S CROOK IN ONE PIECE, Hand-
made.—PREMIUMS, £2, £1, and 10s.

- 1st No. 360 Fraser, A., Knocks Cottage, Girnaig, Ballater.
- 2nd No. 358 Anderson, Donald, The Kennels, Stobo, Peebles.
- 3rd No. 356 Anderson, Donald, The Kennels, Stobo, Peebles.
- V No. 357 Anderson, Donald, The Kennels, Stobo, Peebles.

CLASS 23. WALKING STICK, Hand-made.—
PREMIUMS, £2, £1, and 10s.

- 1st No. 375 M'Lellan, Peter, Dabton Gardens, Thornhill, Dumfriesshire.
 2nd No. 377 M'Nae, James, Glenmuick, Carsphairn, Castle Douglas.
 3rd No. 374 M'Lellan, Peter, Dabton Gardens, Thornhill, Dumfriesshire.
 V No. 368 Anderson, Donald, The Kennels, Stobo, Peebles.
 H No. 370 Grant, David, Ladyward, Lockerbie.
 C No. 371 Grant, David, Ladyward, Lockerbie.
 C No. 372 Grant, David, Ladyward, Lockerbie.
 C No. 379 Scott, William James, Hartwoodmyres, Selkirk.

CLASS 24. STUFFED TOY, Jointed.—PREMIUMS,
£2, £1, and 10s.

- 1st No. 386 Walker, Mrs C. M., Store House, Blair Atholl (Rabbit).

CONFINED CLASSES.

**Open to Women's Rural Institutes and Members thereof
 in the whole of Scotland.**

**CLASS 25. SPECIMEN OF TAPESTRY (Canvas Work) in FLOREN-
 TINE, GROSPPOINT, or PETIT POINT STITCHES.—PREMIUMS,**
£3, £2, and £1.

- 1st No. 389 Muirhead, Miss S. G. F., Camoquhill-Douglas, Balfron,
 Stirlingshire (Sampler—Petit Point).

CLASS 26. SPECIMEN OF CORDED QUILTING (any article).—
—PREMIUMS, £2, £1, and 10s.

- 1st No. 391 Millar, Mrs Jean W., Shawsholm, Closeburn, Dumfriesshire
 (Cushion).
 2nd No. 390 Matheson, Miss Barbara, Keppoch House, Arisaig, Inverness-
 shire (Cushion).

CLASS 27. SPECIMEN OF SMOCKING (any article).—
PREMIUMS, £3, £2, and £1.

- 1st No. 393 Gardner, Mrs B. H. M., Machany House, by Auchterarder
 (Child's Dress).
 2nd No. 395 Millar, Mrs Jean W., Shawsholm, Closeburn, Dumfriesshire
 (Child's Dress).
 3rd No. 396 Somerville, Mrs, Makerstoun, Kelso (Collar and Cuffs).

CLASS 28. HAND-KNITTED WOOLLEN JUMPER or CARDIGAN, not Shetland or Fair Isle Pattern.—PREMIUMS, £2, £1, and 10s.

- 1st No. 413 M'Rae, Mrs J. E., Briar Cottage, Blair Atholl (Jumper).
 2nd No. 425 Villiers-Stuart, Mrs E. N., Upper Ostaig, Sleat, Kyle, Ross-shire (Jumper).
 3rd No. 398 Andrew, Mrs N. G., Bogfern, Fisherie, Turriff (Jumper).
 V No. 414 Manson, Mrs M. J., Thistledome, Stenness, Orkney (Jumper).
 H No. 415 Millar, Mrs Jean W., Shawsholm, Closeburn, Dumfriesshire (Jumper).
 C No. 401 Dewar, Miss C., 45 Main Street, Tobermory, Isle of Mull (Cardigan).
 C No. 416 Murchie, Miss Winnie, 67 Russell Street, Ayr (Jumper).
 C No. 419 Rosher, Miss Barbara, 32 Castle Street, Duns, Berwickshire (Cardigan).

CLASS 29. HAND-SEWN UNDERWEAR, Two Articles.—PREMIUMS, £2, £1, and 10s.

- 1st No. 432 Wardrop, Miss Nessie P. C., The Barracks, Livingston, Mid Calder (Slip and Panties).

CLASS 30. LADIES' HAND-KNIT WOOLLEN STOCKINGS, 2-ply.—PREMIUMS, £2, £1, and 10s.

- 2nd No. 433 MacKenzie, Miss Kathleen H., Meadow House, St Boswells.

CLASS 31. HAND-WOVEN ARTICLE, made on a Table Loom or one weaving narrow width.—PREMIUMS, £2, £1, and 10s.

- 1st No. 437 Matheson, Miss Barbara, Keppoch House, Arisaig, Inverness-shire (Scarf).
 2nd No. 435 MacEwen, Lady M. B., Brachead Cottage, North Kessock, Ross-shire (Scarf).
 3rd No. 436 MacPhail, Miss Christina, Minchview, Locheport, Isle of North Uist (Scarf).
 V No. 438 Matheson, Mrs Farquhar, Keppoch House, Arisaig, Inverness-shire (Scarf).
 H No. 434 MacEwen, Lady M. B., Brachead Cottage, North Kessock, Ross-shire (Sampler).
 C No. 439 Sunter, Miss E., Mount Grange, Elie, Fife (Scarf).

LIVE STOCK JUDGING COMPETITION.

(Arranged in co-operation with the Scottish Association of Young Farmers' Clubs and confined to Young Farmers' Club Members.)

'Glasgow Herald' Challenge Cup, value £75, to be awarded each year to the team winning the First Prize in the Competition. Given by Messrs George Outram & Co., Ltd., Glasgow.

Perthshire Association, 1098 points.

TEAM COMPETITION.

1st, £6 and 3 Medium Silver Medals.

Perthshire Association, 1098 points.

Charles Hay, Easter Rhynd, Bridge of Earn.

J. A. Niven, Gloagburn, Tibbermore.

J. A. Thom, Byers, Guildtown.

2nd, £4 and 3 Medium Bronze Medals.

Lanarkshire Association, 1085 points.

W. Barr, Harelaw, Lanark.

T. Gray, Longside, Kirkfieldbank.

C. Hamilton, Headsmuir, Carluke.

3rd, £3.

Stewartry Association, 1047 points.

R. Alexander, Strathmaddie, Newton-Stewart.

William Service, Calgow, Newton-Stewart.

J. Welch, Barholm, Gatehouse-of-Fleet.

4th, £2.

Dumfriesshire Association, 1044 points.

J. Kennedy, Ulzieside, Sanquhar.

R. Osborne, Castlehill, Thornhill.

T. K. Paterson, Auchengassel, Thornhill.

NEW IMPLEMENTS.

The Judges, having inspected the new implements submitted for competition, awarded Silver Medals to:—

Cuthbertson, James A., Ltd., Biggar, Lanarkshire—the Drainage Plough, Type "F."

International Harvester Company of Great Britain, Ltd., "Harvester House," 259 City Road, London, E.C.1—the No. 50-T Automatic One-man Pick-up Hay and Straw Baler.

Oswald, John, & Son, 14 Damacre Road, Brechin, Angus—the "Allways" 3-way Hydraulic Tipping Trailer.

Russell, A. M., Ltd., 213-221 Balgreen Road, Edinburgh—the Multi-planter Cabbage Transplanter (Clicker Unit), fitted with Ritchie "Easy-Feed" Planting Attachment.

JUDGES.

Shorthorn—Sylvester Campbell, Kinnellar, Kinaldie, Aberdeen; W. Garne, Aldsworth, Northleach, Cheltenham.

Aberdeen-Angus—F. G. M'Conachie, "Marlow," Petrie Crescent, Elgin; W. G. Macpherson, Mulben Mains, Mulben, Banffshire.

Galloway—Thomas Hamilton, Whiteside, Gatehouse, Castle-Douglas.

Belted Galloway—J. Faed Sproat, Boreland of Anwoth, Gatehouse, Castle-Douglas.

Highland Cattle—Captain John MacGillivray, Calrossie, Nigg Station, Ross-shire.

Ayrshire—Walter Adamson, Harleyholm, Carmichael, Biggar; James M'Intyre, Logan Mains, Ardwell, Wigtownshire.

British Friesian—R. J. Gladstone, Holmside Hall Farm, Burnhope, Co. Durham; John R. M'Caw, Watterybutts, Errol.

Jersey—Dr R. W. Wheldon, The Moors, Fence Houses, Co. Durham.

Hill Cattle—John B. Fowlie, Aberdour House, New Aberdour, Fraserburgh.

Clydesdale—John Hendrie, Carrington Mains, Gorebridge; John Lang, Hayston, Leuchars, Fife; William A. Murdoch, Balgreen, Hollybush, Ayrshire; John Stirling, Letham, Hillend, Dunfermline.

Hunters: Breeding Classes—J. J. Paterson, Terrona, Langholm.

Hunters: Saddle Classes—J. J. Paterson, Terrona, Langholm.

Hunters: Hack Class—J. J. Paterson, Terrona, Langholm.

Riding Ponies—J. J. Paterson, Terrona, Langholm.

Hill Ponies—J. J. Paterson, Terrona, Langholm.

Highland and Western Island Ponies—Peter D. Robertson, Castlecraig, Nigg, Ross-shire.

Shetland Ponies—Douglas D. Murray, The Dene, Seaham Harbour, Co. Durham.

Blackface—Robert M'Naughton, Rhuvag, Balquhider, Lochearnhead; Robert C. Paterson, Greenshields, Carnwath.

Cheviot—Andrew Beattie, Parkhouse, Canonbie.

North Country Cheviot—Ian M. Campbell, Balblair, Invershin, Sutherlandshire.

Border Leicester—Niven M. Paterson, Bank House, Turriff.

Half-Bred—John C. Brown, Hundalee, Jedburgh.

Oxford Down—J. T. Eady, Pytchley Lodge, Kettering.

Suffolk—G. A. Goodchild, The Hall, Great Yeldham, Essex.

Goats—Captain A. A. Plimpton, Walkington, Beverley, East Yorks.

Large White—Francis Farquharson, Holywell Farm, Watford.

Large Black—T. L. Ward, Cokhay, Repton, Derby.

Poultry—H. S. Anthony, Euxton, Chorley, Lancs.—Classes 22-40, 50-65, 84-104; M. Harrison, Milverton, Park Road, Haslington, Crewe—Classes 1-21, 41-49, 66-83.

Dairy Produce—Henry M'Fadzean, Messrs A. M'Lelland & Son, Ltd., Stranraer.

Honey, &c.—James Struthers, West of Scotland Agricultural College, Auchincruive, Ayr.

Rural Industries—Miss J. Bruce, 111A George Street, Edinburgh—Classes 1, 2, 3, 4, 5, 6, 7, 8, 9, 18, 19, 20, 28, 30, 31; Mrs J. W. Butter, Seafeld, 38 Broadstone Park, Inverness, and Mrs George Grant, M.B.E., Glenfarclas, Blackboat—Classes 10, 11, 12, 13, 14, 15, 16, 24, 25, 26, 27, 29; Hamish M'Pherson, Inglis Street, Inverness—Classes 17, 21, 22, 23.

STEWARDS.

Cattle.—J. E. Kerr, C.B.E., of Harviestoun, Dollar.

Horses.—George Grant of Glenfarclas, Blacksboat.

Sheep, Goats, and Pigs.—Captain James Craig, Gwydyr House, Comrie Road, Crieff.

Poultry.—Captain R. Maclean of Drynie, North Kessock, by Inverness.

Forage.—Francis W. Walker of Leys, Leys Castle, Inverness.

Implements.—William D. Simpson, Highfield, North Berwick.

Flower Show.—J. C. Wallace-Mann, Carrington Barns, Gorebridge.

Special Events.—Major R. F. Brebner, C.B.E., The Leuchold, Dalmeny House, Edinburgh.

Grand Stands.—R. Scott Aiton, M.C., Legerwood, Earlstoun.

Gates.—James Wither, Awhirk, Stranraer.

Catering, Bees, Honey, &c.—William Montgomery, Banks, Kirkcudbright.

ASSISTANT STEWARDS.

Cattle.—William Hogg, Clackmae, Earlstoun.

Horses.—John L. Sleight, Newseat of Tolquhon, Tarves.

Sheep, Goats, and Pigs.—Captain Thomas Elliot, O.B.E., Thirlestane, Lauder.

Forage.—William Allison, Almond Hill, Kirkliston.

Implements.—Thomas A. Wedder- spoon, Castleton, Eassie.

Special Events.—John Niven, Gloag- burn, Tibbermore.

Grand Stands.—Lieut.-Colonel Sir Guy Shaw-Stewart, Bt., M.C., Ard- gowan, Inverkip.

Gates.—J. W. Alexander, M.V.O., Langshaw, Moffat; George Mundell, Tarradale, Muir of Ord.

ATTENDING MEMBERS.

SHORTHORN.—*William J. Reid, Matthew Templeton, Gilbert Brown, J. H. Fraser, John H. Gair.*

ABERDEEN-ANGUS.—*R. Balfour Kerr, Peter Gordon, George Douglas, William Robertson.*

GALLOWAY.—*John Niven, Peter W. Crawford, John Houston, James L. M'Donald.*

BELTED GALLOWAY.—*William Hogg, William Harley.*

HIGHLAND CATTLE.—*James Durno, Lieut.-Colonel Sir Guy Shaw-Stewart, Bt., M.C., Sir John Brooke, Bt., John Calder, William Grant.*

AYRSHIRE.—*Captain Thomas Elliot, O.B.E., J. Norman H. Steele, B.Sc., Captain D. G. Davidson, Peter M'A. R. Pottie, Wilfred G. Scott.*

BRITISH FRIESIAN.—*James Johnston, J. MacKessack Leitch, Douglas D. S. Craib, James A. Scott.*

JERSEY.—*William H. Lawson, William H. M. Gill.*

HILL CATTLE.—*Brigadier J. E. Stirling.*

CLYDESDALE STALLIONS AND COLTS.—*Thomas G. Reid, William R. Petrie, John G. Coghill, Brigadier Ian K. Thomson.*

CLYDESDALE GELDINGS.—*William Allison, James Cameron, Robert Taylor.*

CLYDESDALE MARES AND FILLIES.—*William D. Simpson, Ian C. Menzies, O.B.E., Thomas Black, William Oag, Kenneth W. Walker.*

HUNTERS.—BREEDING CLASSES.—*R. Scott Aiton, M.C., Archibald J. Elder, Lieut.-Colonel J. M. Dunning-White.*
SADDLE CLASSES.—*Major J. A. Warre, M.C.*

RIDING PONIES.—*R. Scott Aiton, M.C., Archibald J. Elder.*

HILL PONIES.—*R. Scott Aiton, M.C., Archibald J. Elder.*

HIGHLAND AND WESTERN ISLAND PONIES.—*J. W. Alexander, M.V.O., George Clyne, James Cameron, B.L., Lieut.-Colonel Frank W. Sopper.*

SHETLAND PONIES.—*James Kilpatrick, Captain R. Maclean, Harold D. Paul, A. R. Wilson.*

BLACKFACE.—*James M'Laren, Captain R. J. Thomson, T. Grainger Alexander, Bailie James M'I., Grigor, D. L. Middleton, Major Gideon C. Rutherford.*

CHEVIOT.—*J. C. Wallace Mann, John Morris, John Scott.*

NORTH COUNTRY CHEVIOT.—*D. M. Allan, Colin J. Campbell, Brigadier G. D. Keith Murray, M.C.*

BORDER LEICESTER.—*Andrew Wilson, Grigor Butler, Neil Robertson.*

HALF-BRED.—*Major A. D. Campbell, Major George G. Petrie.*

OXFORD DOWN.—*Alexander Calder, Dean of Guild MacKay.*

SUFFOLK.—*George Mundell, Gordon F. Duncan.*

GOATS.—*J. G. Mathieson, Councillor MacLachlan, Councillor Mrs MacLeod.*

LARGE WHITE.—*The Earl of Elgin and Kincardine, K.T., C.M.G., David C. MacKessack Leitch.*

LARGE BLACK.—*George J. Grant, David Tuckwell.*

POULTRY.—*Provost Hugh Ross, Treasurer Frame, C.A., George Murray.*

DAIRY PRODUCE.—*John L. Sleigh, Alistair Munro.*

HONEY, &C.—*John N. Petrie.*

RURAL INDUSTRIES.—*Francis W. Walker, Miss Isabella Brown, Councillor MacPherson, Bailie Yeaman, M.B.E.*

Premiums awarded by the Society, 1948.

VETERINARY DEPARTMENT.

CLASS EXAMINATIONS, 1948.

Silver Medals were awarded to the following :—

GLASGOW VETERINARY COLLEGE.

Chemistry	Cedric L. Bent, Kingston, Jamaica.
Biology	Frank Emmett, Glasgow.
Senior Anatomy	Kenneth F. Hosie, Giffnock.
Junior Anatomy	Buchanan M'Culloch, Glasgow.
Physiology	John M. Smith, Johnstone.
Animal Management	Buchanan M'Culloch, Glasgow.
Pathology	William F. H. Jarrett, Croy.
Hygiene	Max Sachs, London.
Surgery	William M. Moors, Ayr.
Medicine	David M'Cracken, Glasgow.
Histology	Buchanan M'Culloch, Glasgow.
Pharmacology	William M. Barr, Helensburgh.
Parasitology	Bernard Finkelstein, Manchester.

13 Large Silver Medals, £27, 9s. 2d.

ROYAL (DICK) VETERINARY COLLEGE.

Chemistry	E. W. Fisher, London.
Biology	E. W. Fisher, London.
Senior Anatomy	F. G. Clegg, Sheffield.
Junior Anatomy	R. Burrows, Derby.
Physiology	E. A. Campbell, Mitcham.
Animal Management	M. Barr, Aberdeen.
Pathology and Bacteriology	G. E. Hayes, Burneside, Kendal.
Veterinary Hygiene and Preventive Medicine	E. H. Shortridge, Barnard Castle.
Surgery	J. K. Rodger, Closeburn.
Medicine	J. R. Thomlinson, Southend, Wigton.
Histology and Embryology	G. M'Callum, Kelty.
Pharmacology	J. B. M. Gellatly, Rutherglen.
Parasitology	G. E. Hayes, Burneside, Kendal.

13 Large Silver Medals, £27, 9s. 1d.

LOCAL GRANTS, &c., 1948.

11 Societies—Grants of £15 each for Stallions engaged	£165	0	0
20 : 16 Grants of £12 each, 2 of £11, 1 of £10, and 1 of £9 for Show Premiums	233	0	0
3 Grants to Agricultural Societies in Orkney	8	10	0
Grants to S.W.R.I. Federations	80	0	0
Grant to Scottish Gardens and Allotments Society, £15; Medals, £22, 4s. 3d.	37	4	3
Medals for Hoeing, 1947-48	28	11	4
Medals for Ploughing, 1947-48	116	10	10

Long Service Awards :—

Certificates, £154, 0s. 10d. (1947-48); Medals, Silver-gilt, £23, 7s. 8d.
 (1947-48); Medals, Silver, £83, 5s. 8d. (1947-48)

260 14 2

 £929 10 7

ABSTRACT OF PREMIUMS.

Local Grants	£668	16	5
Long Service Awards	260	14	2
Veterinary College (26 Medals)	54	18	3
	£984	8	10

STATE OF THE FUNDS

OF

The Royal Highland and Agricultural Society of Scotland

As at 30th NOVEMBER 1948

GENERAL FUNDS.

I. BRITISH GOVERNMENT SECURITIES—			
£25,000 3½ per cent War Loan, at 103½	.	.	£25,875 0 0
£20,000 3½ per cent Conversion Loan, at 106½	.	.	21,300 0 0
£5,000 3 per cent Funding Loan, at 104	.	.	5,200 0 0
£1,000 2½ per cent Defence Bonds, Conversion Issue, at 100	.	.	1,000 0 0
£1,000 3 per cent Do. Fourth Issue, at 100	.	.	1,000 0 0
£9,200 3 per cent Treasury Stock, at 97	.	.	8,924 0 0
£10,000 3 per cent War Loan, at 103½	.	.	10,387 10 0
£2,300 3 per cent Savings Bonds, 1955-65, at 104½	.	.	2,397 15 0
£3,000 Do. do. 1960-70, at 103½	.	.	3,101 5 0
£2,500 Do. do. 1965-75, at 102½	.	.	2,568 15 0
£59,375, 18s. 9d. British Transport 3 per cent Guaranteed Stock, 1978-88, at 99½	.	.	58,153 5 6
			<u>£139,907 10 6</u>
II. HERITABLE BOND—			
£2,500 at Commissioners' Rates	.	.	2,500 0 0
III. BANK STOCKS—			
£5,400 Royal Bank of Scotland Stock, at 485	.	£26,190 0 0	
£1,800 Bank of Scotland Stock, at 67s. 9d.	.	6,097 10 0	
£2,850 Barclays Bank Ltd. "B" Stock, at 80s.	.	11,400 0 0	
		<u></u>	43,687 10 0
IV. COLONIAL GOVERNMENT STOCKS—			
£2,000 Western Australia 4 per cent Inscribed Stock (1942-62), at 103½	.	£2,070 0 0	
£1,120 Victorian Government 3½ per cent Consolidated Inscribed Stock (1929-49), at 102½	.	1,148 0 0	
		<u></u>	3,218 0 0
V. DEPOSIT RECEIPTS with the Royal Bank of Scotland, Edinburgh			
	.	.	10,000 0 0
VI. ESTIMATED VALUE of Building—			
8 Eglinton Crescent, Edinburgh	.	.	5,000 0 0
VII. ESTIMATED VALUE of Furniture, Paintings, Books, &c.			
	.	.	1,500 0 0
VIII. ARREARS OF SUBSCRIPTIONS considered recoverable			
	.	.	114 3 6
IX. BALANCES at 30th November 1948			
	.	.	3,649 0 11
AMOUNT OF GENERAL FUNDS			<u>£209,576 4 11</u>

SPECIAL FUNDS.

TWEEDDALE GOLD MEDAL FUND—

£887, 16s. 3d. British Transport 3 per cent Guaranteed Stock, 1978-88, at 99½	£884	9	8
£100 3¼ per cent War Loan, at 103½	103	10	0
Sum on Deposit Receipt with British Linen Bank	55	2	7
Sum on Current Account Do.	3	1	6
	<u>£1,046</u>	<u>3</u>	<u>9</u>

FIFE AND KINROSS PERPETUAL GOLD CHALLENGE CUP FUND—

£658, 15s. 10d. British Transport 3 per cent Guaranteed Stock, 1978-88, at 99½	£656	6	5
Sum on Deposit Receipt with British Linen Bank	47	6	11
Sum on Current Account Do.	20	12	5
		<u>724</u>	<u>5 9</u>

PAISLEY PERPETUAL GOLD CHALLENGE CUP FUND—

£980, 17s. 6d. British Transport 3 per cent Guaranteed Stock, 1978-88, at 99½	£977	3	11
£100 3 per cent Savings Bonds, 1955-65, at 104½	104	5	0
Sum on Deposit Receipt with British Linen Bank	84	10	0
Sum on Current Account Do.	31	15	2
		<u>1,197</u>	<u>14 1</u>

RENFREWSHIRE PERPETUAL GOLD CHALLENGE CUP FUND—

£846, 13s. British Transport 3 per cent Guaranteed Stock, 1978-88, at 99½	£843	9	6
£100 3 per cent Savings Bonds, 1955-65, at 104½	104	5	0
Sum on Deposit Receipt with British Linen Bank	56	10	7
Sum on Current Account Do.	27	16	4
		<u>1,032</u>	<u>1 5</u>

WILLIAM TAYLOR MEMORIAL PRIZE FUND—

£526, 11s. 6d. British Transport 3 per cent Guaranteed Stock, 1978-88, at 99½	£524	12	0
£100 3 per cent Savings Bonds, 1955-65, at 104½	104	5	0
Sum on Deposit Receipt with British Linen Bank	41	8	1
Sum on Current Account Do.	8	8	9
		<u>678</u>	<u>13 10</u>

WILLIAM DUTHIE PERPETUAL SILVER CHALLENGE CUP FUND—

£300 2½ per cent Consolidated Stock, at 80	£240	0	0
Sum on Deposit Receipt with British Linen Bank	17	8	5
Sum on Current Account Do.	7	10	0
		<u>264</u>	<u>18 5</u>

THE JAMES ARCHIBALD PRIZE—

£720 3¼ per cent War Loan, at 103½	£745	4	0
Sum on Deposit Receipt with Royal Bank of Scotland	55	14	11
		<u>800</u>	<u>18 11</u>

KINMONTH GOLD QUACH FUND—

£50 3½ per cent War Loan, at 103½	£51	15	0
Sum on Deposit Receipt with British Linen Bank	9	10	5
Sum on Current Account Do.	1	14	10
		<u>63</u>	<u>0 3</u>

"DUTHIE" PRIZE FUND—

£1,053, 3s. British Transport 3 per cent Guaranteed Stock, 1978-88, at 99½	£1,049	10	7
Sum on Deposit Receipt with Royal Bank of Scotland	74	9	9
		<u>1,124</u>	<u>0 4</u>

THE JAMES KILPATRICK TROPHY FUND—

£600 3¼ per cent War Loan, at 103½	£621	0	0
Sum on Deposit Receipt with Royal Bank of Scotland	216	5	9
Sum on Current Account with Royal Bank of Scotland	21	0	0
		<u>858</u>	<u>5 9</u>

AMOUNT OF SPECIAL FUNDS . . . £7,790 2 6

EDINBURGH, 27th December 1948.—As Auditor of the Royal Highland and Agricultural Society of Scotland, I have examined the Securities for the Investments as detailed in the above State of the Funds and have found them in order. The Titles to the Heritable Estate and the Bond for Sum lent on Heritable Security are certified by the Society's Law Agents to be in order.

GEO. JAMES GREGOR, C.A.

JOSHUA ROSS-TAYLOR, Treasurer.

JAMES R. LUMSDEN, Chairman of Board of Directors.

EDINBURGH, 5th January 1949.

ABSTRACT of the ACCOUNTS of the ROYAL HIGHLAND and

Charge.

1. BALANCES at 30th November 1947	£129 16 8	
2. ARREARS of Subscriptions outstanding at 30th November 1947	£92 14 6	
Whereof due by Members who have compounded for life and whose arrears are thereby extinguished	18 13 6	
		74 1 0
3. INTEREST AND DIVIDENDS—		
(1) Interest—		
On Heritable Bond, less Income-tax	£42 19 5	
On Railway Debenture and Preference Stocks, now British Transport Stock, do.	1,017 17 2	
On Colonial Government Stocks, do.	65 11 4	
On British Government Stocks, do.	1,863 12 6	
On Deposit Receipts	2 2 10	
	£2,992 3 3	
(2) Dividends on Bank Stocks, less Income-tax	843 3 0	
		3,835 6 3
4. SUBSCRIPTIONS—		
Annual Subscriptions	£1,330 12 0	
Life Subscriptions	10,776 3 0	
		12,106 15 0
5. 'TRANSACTIONS'—Miscellaneous Sales and other Receipts	42 8 5	
6. INCOME-TAX repaid for year to 5th April 1948	2,421 7 4	
7. N.D.D. EXAMINATION at Auchinervie, 1947—Refund of Expenses	100 2 3	
8. N.D.A. EXAMINATION, 1948—Balance of Receipts due to the National Agricultural Examination Board	196 3 1	
9. RECEIPTS from Inverness Show, 1948	48,205 6 4	
10. INVESTMENT REPAID	2,500 0 0	
11. UPLIFTED from Deposit Receipt	1,000 0 0	
12. MISCELLANEOUS	7 0 0	
SUM OF CHARGE	£70,618 6 4	

EDINBURGH, 27th December 1948.—As Auditor of the Royal Highland and Agri-Accounts of the Society for the year ending 30th November 1948 and have found books and Accounts I have prepared an Account of Charge and Discharge of the 30th November 1948, of which the above is an Abstract.

EDINBURGH, 5th January 1949.

AGRICULTURAL SOCIETY of SCOTLAND for Year 1947-1948.

Discharge.

1. ESTABLISHMENT EXPENSES—

Salaries and Wages and Allowance for Cleaning	£4,610	6	8
Allowance to Mrs Cowie	100	0	0
Feu-duty, £16, 0s. 11d. ; Rates and Taxes, £101, 2s. 0d.	117	2	11
Coal, Gas, and Electric Light	106	8	5
Insurances, £93, 0s. 11d. ; Special Annuity Premium, £51, 3s. 9d. ; Superannuation Scheme, £393, 16s. 5d. ; Telephone and Telegrams, £109, 5s. 1d. ; Repairs and Furnishings, £88, 1s. 3d.	735	7	5

£5,569 5 5

2. FEE to Auditor of Accounts for 1946-47 120 0 0

3. EDUCATION—N.D.A. Examination, 1947 112 7 3

4. VETERINARY DEPARTMENT—Medals to Students 54 18 3

5. DAIRY DEPARTMENT—N.D.D. Examination, 1947 140 1 0

6. DAIRY DEPARTMENT, 1948—

Expenses of N.D.D. Examination held at Auchincruive	£455	13	1
Less Entry Fees	267	15	0
	187	18	1

1,625 14 7

7. SOCIETY'S 'TRANSACTIONS' 698 3 2

8. ORDINARY Printing, £205, 14s. 9d. ; Advertising, £79, 9s. 9d. ; Stationery, Books, &c., £267, 18s. 8d. ; Postages and Receipt Stamps, £145 150 0 0

9. RETIRING Allowance to Professor Stanfield, Consulting Engineer 430 11 0

10. MISCELLANEOUS Payments 732 8 9

11. GRANTS to Local Societies, 1947 260 14 2

12. CERTIFICATES and Medals for Long Service

13. SPECIAL GRANTS—

Animal Diseases Research Association, £200 ; Glasgow Veterinary College, £150 ; Scottish Agricultural Organisation Society, £100 ; other Grants, £162, 2s. 0d.	612	2	0
--	-----	---	---

14. EXPENSES in connection with Inverness Show, 1948—

Premiums, £3,550, 8s. 0d. ; Medals, £90, 19s. 7d. ; Expenses, £33,798, 9s. 6d. (page 7)	37,439	17	1
---	--------	----	---

15. PLACED on Deposit Receipt 10,000 0 0

16. ARREARS removed from Subscription List at 30th November 1948 14 13 6

17. ARREARS of Subscriptions outstanding at 30th November 1948 114 3 6

18. BALANCE of cost of Timber to be charged against future Shows 8,706 7 8

19. BALANCES at 30th November 1948—

On Account Current with Royal Bank of Scotland—			
Edinburgh Account	£1,542	5	9
London Accounts	2,059	1	7
In hands of Secretary	47	13	7
	3,649	0	11

SUM OF DISCHARGE £70,618 6 4

cultural Society of Scotland, I beg to report that I have examined the Books and them to be correctly stated and sufficiently vouched and instructed. From the Intromissions of the Treasurer with the Funds of the Society for the year ending
GEO. JAMES GREGOR, C.A., Auditor.

JOSHUA ROSS-TAYLOR, Treasurer.

JAMES R. LUMSDEN, Chairman of Board of Directors.

ABSTRACT of the ACCOUNTS

Receipts.

1. AMOUNTS COLLECTED DURING SHOW—

Gates	£26,213	9	7
Grand Stand	3,604	5	10
Flower Show	858	16	0
Catalogues and Programmes	1,431	10	7
Tickets sold—supplies, &c.	110	2	6
Cloak-Rooms and Lavatories	157	12	1
	<u>£32,375</u>	<u>16</u>	<u>7</u>

2. MOTOR ENCLOSURES 1,696 3 1

3. RENT OF STALLS—

Implement and other Exhibits	£9,150	12	0
Stock Exhibits, &c.	3,450	3	0
		<u>12,600</u>	<u>15 0</u>

4. RENT OF REFRESHMENT BOOTHS 636 0 0

5. ADVERTISEMENTS IN CATALOGUE AND PREMIUM LIST . . . 474 1 8

6. SUBSCRIPTIONS IN AID OF PREMIUMS 376 14 0

7. MISCELLANEOUS 45 16 0

£48,205 6 4

Note.—To the credit balance of £10,765 9 3

Add Sums due by Exhibitors for fitting up of stands, &c.,
amounting to 258 0 2

Contributions to Prize Fund outstanding 58 0 0

£11,081 9 5

Deduct Premiums undrawn at 30th

November 1948 £108 0 0

Accounts outstanding 747 12 2

855 12 2

Making the probable surplus . . . £10,225 17 3

of the INVERNESS SHOW, 1948.

Payments.

1. SHOWYARD—		
Fitting up of Showyard	£9,472	19 6
Timber, less amount to be charged to future Shows	7,618	1 7
Hire of Canvas, &c.	2,847	5 1
Transport of Plant and Timber	1,474	14 4
Plumber Work	1,098	10 6
Decoration and Hire of Furnishings	830	0 6
Rosettes, £57, 7s. 0d.; Penning and Cartage Charges on Poultry, £112, 13s. 0d.; Electric Light and Power, £56, 10s. 0d.; Hire of Sleepers and Cartage, £215, 2s. 5d.; Toilet Requisites, &c., £8, 0s. 3d.; Flower Show, £34, 2s. 6d.; Floral Decorations, £40, 8s. 0d.; Miscellaneous, £22, 18s. 3d.; Transport of Office Equipment, £27, 3s. 3d.; Hire of Jumps, £10; Loudspeaker Installation, £49, 15s. 0d.	633	19 8
Salary to Frank Reid, Showyard Erector—To Account	300	0 0
	£24,275	11 2
2. FORAGE AND BEDDING FOR STOCK	797	9 4
3. POLICE	0	0 0
4. TRAVELLING EXPENSES of Judges, Stewards, and Staff	605	5 0
5. HOTELS AND LUNCHEONS—		
Hotels for Directors, Stewards, Judges, &c.	£723	7 4
Luncheons in Showyard for Directors, Stewards, Judges, Attending Members, Staff, Breakfasts, and Teas	551	0 5
	1,274	7 9
6. ASSISTANTS and Show Staff	1,199	15 3
7. MUSIC, Displays, Pageant, &c.	1,488	8 5
8. PRINTING, Members' Badges, Stationery, &c.	2,293	19 8
9. ADVERTISING and Bill-posting	1,177	4 10
10. CONCERT for Attendants	10	8 0
11. VETERINARY SURGEON	26	5 0
12. SHOW TREASURER	216	8 2
13. POSTAGES AND TELEPHONES	215	14 4
14. AMBULANCE	10	4 8
15. INSURANCES	116	10 3
16. MISCELLANEOUS	90	17 8
	£33,798	9 6
17. PREMIUMS drawn at 30th November 1948	3,641	7 7
	£37,439	17 1
CREDIT BALANCE	10,765	9 3
	£48,205	6 4

JOSHUA ROSS-TAYLOR, *Treasurer.*JAMES R. LUMSDEN, *Chairman of Board of Directors.*GEO. JAMES GREGOR, C.A., *Auditor.*

ABSTRACT of the ACCOUNTS of the Charge.

I. FUNDS at 30th November 1947—

£3,193 London and North-Eastern Railway Company 3 per cent Debenture Stock	£2,650	0	0
£5,551, 16s. 3d. 3½ per cent Conversion Stock	4,216	18	2
£500 Queensland 3½ per cent Inscribed Stock, 1950-70	450	1	0
£812 London Midland and Scottish Railway Company 4 per cent Debenture Stock	1,041	6	3
£190 London Midland and Scottish Railway Company 4 per cent Guaranteed Stock	259	1	11
£400 3 per cent Savings Bonds, "A," 1955-65	400	0	0
	<u>£9,017</u>	<u>7</u>	<u>4</u>

BALANCES with Royal Bank of Scotland—

On Account Current	£82	10	5
On Deposit Receipt	400	0	0
	<u>482</u>	<u>10</u>	<u>5</u>
	£9,499	17	9

II. INTEREST ON INVESTMENTS—

On £3,193 London and North-Eastern Railway Company 3 per cent Debenture Stock, now £3,296, 15s. 5d. British Transport 3 per cent Guaranteed Stock, 1978-88, for year to 1st July 1948	£97	6	11
Less tax	43	16	1

£53 10 10

On £5,551, 16s. 3d. 3½ per cent Conversion Stock, for year to 1st October 1948	£194	6	2
Less tax	87	8	8

106 17 6

On £500 Queensland 3½ per cent Inscribed Stock, 1950-70, for year to 1st July 1948	£17	10	0
Less tax	7	17	6

9 12 6

On £812 London Midland and Scottish Railway Company 4 per cent Debenture Stock, now £963, 14s. 10d. British Transport 3 per cent Guaranteed Stock, 1978-88, for year to 1st July 1948	£30	13	10
Less tax	13	16	3

16 17 7

On £190 London Midland and Scottish Railway Company 4 per cent Guaranteed Stock, now £205, 1s. 7d. British Transport 3 per cent Guaranteed Stock, 1978-88, for year to 1st July 1948	£6	17	6
Less tax	3	1	10

3 15 8

On £400 3 per cent Savings Bonds, "A," 1955-65, for year to 15th August 1948	£12	0	0
Less tax	5	8	0

6 12 0

III. INCOME-TAX repaid for year to 5th April 1948	197	6	1
	161	17	0

SUM OF CHARGE £9,859 0 10

ARGYLL NAVAL FUND for the Year 1947-1948.

Discharge.

I. ALLOWANCES to two Recipients as follows :—

2 at £60	£120	0	0
----------	---	---	---	---	---	---	---	---	------	---	---

II. PLACED ON DEPOSIT RECEIPT	.	.	.	£300	0	0
-------------------------------	---	---	---	------	---	---

III. FUNDS at 30th November 1948—

£4,465, 11s. 10d. British Transport 3 per	
cent Guaranteed Stock, 1978-88	£3,950 8 2

£5,551, 16s. 3d. 3½ per cent Conversion Stock	4,216 18 2
---	------------

£500 Queensland 3½ per cent Inscribed Stock,	
1950-70	450 1 0

£400 3 per cent Savings Bonds, "A," 1955-65	400 0 0
	<u>£9,017 7 4</u>

Note.—The above Funds are entered at cost price. The market value at 30th November 1948 was £11,179, 11s. 4d.

Balances with Royal Bank of Scotland—

On Account Current	.	.	£21	13	6	
On Deposit Receipt	.	.	700	0	0	
					<u>721</u>	13 6
						<u>9,739 0 10</u>
SUM OF DISCHARGE	.	.				<u>£9,859 0 10</u>

JOSHUA ROSS-TAYLOR, *Treasurer.*
 JAMES R. LUMSDEN, *Chairman of Board of Directors.*
 GEO. JAMES GREGOR, C.A., *Auditor.*

VIEW OF RECEIPTS AND PAYMENTS for YEAR 1947-1948.

Receipts.

INTEREST AND DIVIDENDS	£3,835	6	3
INCOME-TAX REPAID for year to 5th April 1948	2,421	7	4
	<u>£6,256</u>	13	7
ANNUAL SUBSCRIPTIONS AND ARREARS received	1,275	16	0
INVERNESS SHOW :—			
Receipts	£48,205	6	4
Payments	<u>37,439</u>	17	1
		10,765	9 3
		<u>£18,297</u>	18 10

Payments.

ESTABLISHMENT EXPENSES (see page 285)	£5,569	5	5
FEE TO AUDITOR for 1946-47	120	0	0
VETERINARY DEPARTMENT	54	18	3
EDUCATION	144	1	0
RETIRING ALLOWANCE TO CONSULTING ENGINEER	150	0	0
SOCIETY'S 'TRANSACTIONS'	1,583	6	2
ORDINARY Printing, Stationery, Advertising, and Miscellaneous Accounts	1,121	14	2
GRANTS TO LOCAL SOCIETIES, &c.	993	2	11
	<u>£9,736</u>	7	11
<i>Extraordinary Expenditure</i> (see page 285)—			
Special Grants	£612	2	0
Balance of Cost of Timber	<u>8,706</u>	7	8
		9,318	9 8
		<u>19,054</u>	17 7
DEFICIT		£756	18 9
<i>Extraordinary Income</i> —			
Life Subscriptions		10,776	3 0
EXCESS OF RECEIPTS		<u>£10,019</u>	4 3

JOSHUA ROSS-TAYLOR, *Treasurer.*
 JAMES R. LUMSDEN, *Chairman of Board of Directors.*
 GEO. JAMES GREGOR, C.A., *Auditor.*

PROCEEDINGS AT BOARD MEETINGS.

MEETING OF DIRECTORS, 5TH MAY 1948.

Mr JAMES R. LUMSDEN, C.B.E., of Arden, Dunbartonshire, in the Chair.

Present.—Ordinary Directors—Mr J. W. Alexander, M.V.O.; Mr William Allison; Mr Thomas Black; Mr Peter W. Crawford; Mr Archibald J. Elder; Captain Thomas Elliot, O.B.E.; Mr George Grant; Mr William Hogg; Mr Robert Balfour Kerr; Mr William H. Lawson; Mr James R. Lumsden, C.B.E.; Mr James M'Laren; Mr J. C. Wallace Mann; Mr Ian C. Menzies, O.B.E.; Mr William Montgomery; Mr John Niven; Mr Thomas Graham Reid; Mr William J. Reid; Captain Ian S. Robertson; Mr John L. Sloigh; Captain R. J. Thomson. *Extraordinary Directors*—Captain James Craig; The Earl of Elgin and Kincardine, K.T., C.M.G.; Mr J. E. Kerr, C.B.E.; Mr J. MacKessack Leitch; Mr George Mundell; Mr William R. Petrie; Mr William D. Simpson; Mr J. Norman H. Steele, B.Sc.(Agric.); Mr Andrew Wilson; Mr James Wither. *Honorary Secretary*—Major R. F. Brebner, C.B.E. *Auditor*—Mr George J. Gregor, C.A.

Inverness Show, 1948.

Sheep Exhibit.—An application was submitted from the North of Scotland College of Agriculture for permission to include in the Educational Exhibit pens containing sheep suffering from deficiency diseases along with sheep which had been successfully treated. The total number of sheep involved would be approximately twelve. The Educational Stand would form three sides of a rectangle, and it was proposed to have the sheep pens in part of the area of ground between the two arms of the stand.

It was decided that the request be granted.

Revision of Bye-Laws.

To give effect to the decision of the Board of Directors at their Meeting on 7th April regarding an increase in Members' subscriptions, the following Resolution was moved by the Chairman, Mr James R. Lumsden, C.B.E., of Arden :—

"That the Bye-Laws of the Society be altered as aftermentioned, with effect in each case as from and after the 1st day of December 1948 :—

(a) *Bye-Laws Numbers 1 and 2 to be annulled.*

(b) *The following Bye-Law to be substituted for the existing Bye-Law No. 1 :—*

'1. The Ordinary Members of the Society, with the exceptions contained in the Bye-Law No. 2, and of holders of the Society's Agricultural Diploma and holders of the Society's First-Class Certificate in Forestry, shall pay at admission, and afterwards annually, in advance, the sum of £1, 10s., with the option and power of redeeming the same by payment of £18 as the purchase of a Life Subscription, and after eight annual payments of £1, 10s. have been made a Life Subscription may be purchased for £12, and after twelve such payments, for £9.'

(c) *The following Bye-Law to be substituted for the existing Bye-Law No. 2 :—*

'2. Proprietors farming the whole of their own lands, whose rental on the Valuation Roll does not exceed £500 per annum, and all Tenant-Farmers, Secretaries or Treasurers of Local Agricultural Associations, Factors resident on Estates, Land Stewards, Foresters, Agricultural Implement Makers, Grain, Seed and Manure Merchants, Agricultural Auctioneers, Cattle Dealers and Veterinary Surgeons, none of them being also owners of land to an extent exceeding £500 per annum, and such other persons as, in respect of their official or other connection with Agriculture, the Board of Directors may consider eligible, shall pay at admission, and afterwards annually, in advance, the sum of £1, with the option and power of redeeming the same by payment of £12 as the purchase of a Life Subscription, and after eight annual payments of £1 have been made a Life Subscription may be purchased for £8, and after twelve such payments, for £6.'

The Resolution was seconded by Major R. F. Brebner, C.B.E., Honorary Secretary, and unanimously adopted.

Special Grants.

On the motion of the Chairman, it was decided to confirm the following proposed Special Grants for the current year :—

Animal Diseases Research Association	£200
Glasgow Veterinary College	150
Edinburgh Highland Reel and Strathspey Society	75
Glasgow and West of Scotland S.P.C.A.	10

Colouring of Wool.

The Secretary reported the receipt, on 13th April, of a letter from the Department of Agriculture for Scotland, inviting the Society to send representatives to a meeting to be held in St Andrew's House on Friday, 16th April. The meeting was called to consider a suggestion that the manufacture, offer for sale, and the use of any sheep dip which would affect the colour of the wool should be prohibited. Mr J. W. Alexander and Captain James Craig had attended the meeting as representatives of the Society.

Captain Craig and Mr Alexander gave a short report on the proceedings at the meeting, at which were also present representatives of the National Farmers' Union, the Sheep Breed Societies, and other interested organisations. The feeling of the meeting appeared to be in favour of prohibiting the manufacture, sale, and use of a material in dip which would not scour out, but there was no unanimity regarding legislation to prevent colouration which would scour out. It was felt, however, that, in view of the possible institution of a Wool Marketing Board, the question regarding colouring might be left over until that body was constituted.

Mr J. W. Alexander and Captain James Craig were thanked for their services in representing the Society at the meeting.

Wool Marketing.

A letter was submitted from the Scottish Agricultural Organisation Society, inviting representatives of the Society to attend a meeting to be held in the North British Station Hotel, Edinburgh, on Friday, 7th May.

It was decided that Major R. F. Brebner, Mr J. W. Alexander, and Captain James Craig be nominated to attend the meeting as representatives of the Society.

National Diploma in Agriculture.

In the absence of Sir Joshua Ross-Taylor, Convener of the Education Committee, the Chairman submitted a Report on the results of the Examination for the National Diploma in Agriculture, held at Edinburgh in April.

Finance.

A Minute of Meeting of Committee, dated 5th May, was submitted and approved. The Minute dealt, *inter alia*, with the following matter :—

Revision of Bye-Laws.—The Resolution to be submitted to the Meeting of the Board regarding revision of the Bye-Laws was submitted and approved. The Resolution gave effect to the decision of the Board of Directors at their Meeting on 7th April regarding an increase in Members' subscriptions.

MEETING OF DIRECTORS, 2ND JUNE 1948.

Mr JAMES R. LUMSDEN, C.B.E., of Arden, Dunbartonshire, in the Chair.

Present.—Ordinary Directors—Mr J. W. Alexander, M.V.O.; Mr William Allison; Mr Peter W. Crawford; Mr James Durno; Mr Archibald J. Elder; Mr Peter Gordon; Mr George Grant; Mr William Hogg; Mr James Johnston; Mr Robert Balfour Kerr; Mr William H. Lawson; Mr James R. Lumsden, C.B.E.; Mr James M'Laren; Mr Ralph S. MacWilliam; Mr J. C. Wallace Mann; Mr Ian C. Menzies, O.B.E.; Mr William Montgomery; Mr John Niven; Mr Thomas Graham Reid; Mr William J. Reid; Mr

John L. Sleight; Brigadier J. E. Stirling; Mr Matthew Templeton; Captain R. J. Thomson. *Extraordinary Directors*—Mr R. Scott Aiton, M.C.; Captain James Craig; Mr J. E. Kerr, C.B.E.; Captain R. Maclean; Mr George Mundell; Mr William D. Simpson; Mr J. Norman H. Steele, B.Sc.(Agric.); Mr Andrew Wilson; Mr James Wither. *Honorary Secretary*—Major R. F. Brebner, C.B.E. *Auditor*—Mr George James Gregor, C.A.

Glasgow Agricultural Exhibition—"The Country comes to Town."

A letter was submitted from the Liquidator of the above Exhibition returning the Guarantee given by the Society. As a result of the winding-up of the Exhibition, there was a surplus of £5807, 18s. 9d., which had been distributed as follows: Scottish Women's Rural Institutes, £105; The Royal Scottish Agricultural Benevolent Institution, £739, 7s. 10d.; Scottish Association of Young Farmers' Clubs, £739, 7s. 10d.; Governors of the West of Scotland Agricultural College, to assist the education of deserving farm workers, £739, 7s. 10d.; Corporation of Glasgow, for charitable objects of an agricultural nature in the City, £3484, 15s. 3d.

Inverness Show, 1948.

Cawdor Cup.—A letter was read from the Clydesdale Horse Society intimating that Professor John R. M'Call was now unable to act as Veterinary Inspector for the Cawdor Cup for Females, and that arrangements had been made for Mr Alexander J. MacLennan, B.Sc., M.R.C.V.S., Eastgate, Inverness, to officiate in place of Professor M'Call.

Dundee Show, 1949.

The Chairman reported that the Special Committee appointed on 3rd December visited Dundee on 14th May, when they had a meeting with representatives of the Corporation and with the Town officials. A visit was also paid to the Show site at Riverside Park. This was the site on which the Show was held in 1933. The area had been extended by some 7 acres, so that 57 acres were now available. The surface had also been considerably improved.

At the meeting at the City Chambers a full discussion took place regarding the provision of an adequate water supply, gas, and electric current. Certain financial details were also dealt with, as well as the question of Police supervision in the Showyard. As these matters had to receive consideration by the Council, it was understood that a communication regarding them would be sent later.

The Town Clerk undertook to approach the various hotels in Dundee and vicinity with a view to securing sufficient accommodation for Directors and Judges during the Show week.

Revision of Bye-Laws.

The alterations in the Society's Bye-Laws, adopted at the Meeting of Directors on 5th May, were formally notified to the Board in terms of the Charter, and, on the motion of the Chairman, seconded by Major R. F. Brebner, C.B.E., their adoption was confirmed.

Wool Marketing.

Mr J. W. Alexander, M.V.O., Langshaw, Moffat, reported that, along with Major R. F. Brebner and Captain James Craig, he had attended a meeting convened by the Scottish Agricultural Organisation Society on 7th May. At the meeting a letter was read intimating that the Government were not taking any wool after the 1948 clip, and that it had been decided to ask the Industry to form some kind of Marketing Scheme on its own. The Government had also intimated in the letter that they were going to guarantee prices until the year 1951, and, after that, they expected the Industry to stand on its own feet. After a good deal of discussion at the meeting, a Sub-Committee had been formed to go into the matter of forming a Producers' Marketing Board, and negotiations were now proceeding between the English, Irish, Welsh, and Scottish representatives with a view to forming a Marketing Board.

The Chairman thanked the three representatives for their Report.

Improvement of Livestock.

A letter was submitted from the Department of Agriculture inviting the Society to appoint representatives to attend a meeting on 4th June to consider suggestions for

amendment of the Regulations under the Improvement of Livestock (Licensing of Bulls) Act, 1931.

It was decided to nominate Major R. F. Brebner and Mr James Wither, Awhirk, Stranraer, to represent the Society at the meeting.

New Members.

The Chairman intimated that the total number of applications for membership at the General Meeting that afternoon was 1055. That figure, along with the 1150 admitted in January, meant a substantial increase in the membership. Several Directors had been specially active in securing new Members. Mr Durno had led in January, but, on this occasion, Mr J. Norman H. Steele, B.Sc.(Agric.), Edinburgh, had secured 147. Mr George Clyne, Caithness, came next with 67; Mr John Niven, Glogaburn, 54; and Mr James Durno, 53. A number of Directors had sent in lists of 40 or less.

The Chairman expressed the thanks of the Board to those Directors who had been active in bringing in new Members.

MEETING OF DIRECTORS HELD IN THE SHOWYARD, INVERNESS, 23RD JUNE 1948.

Mr JAMES R. LUMSDEN, C.B.E., of Arden, Dunbartonshire, in the Chair.

Present.—Vice-President—Major John Stirling of Fairburn, Muir-of-Ord, Ross-shire. *Ordinary Directors*—Mr William Allison; Mr George Clyne; Mr Peter W. Crawford; Mr James Durno; Mr Archibald J. Elder; Captain Thomas Elliot, O.B.E.; Mr Peter Gordon; Mr George Grant; Mr William Hogg; Mr James Johnston; Mr Robert Balfour Kerr; Mr James Kilpatrick; Mr J. C. Wallace Mann; Mr Ian C. Menzies, O.B.E.; Mr William Montgomery; Mr William J. Reid; Captain Ian S. Robertson; Mr John L. Sleigh; Lieut.-Colonel Sir Guy Shaw-Stewart, Bt., M.C.; Brigadier J. E. Stirling; Mr Matthew Templeton; Captain R. J. Thomson; Mr Thomas A. Wedderspoon. *Extraordinary Directors*—Captain James Craig; The Earl of Elgin and Kincardine, K.T., C.M.G.; Mr J. E. Kerr, C.B.E.; Captain R. Maclean; Mr George Mundell; Mr William R. Petrie; Mr William D. Simpson; Mr J. Norman H. Steele, B.Sc.(Agric.); Mr Andrew Wilson; Mr James Wither. *Treasurer*—Sir Joshua Ross-Taylor. *Honorary Secretary*—Major R. F. Brebner, C.B.E. *Auditor*—George James Gregor, C.A.

Protests.

The Secretary reported that no Protests had been lodged.

Precepts.

The Chairman was authorised to sign the Precepts for the Prizes awarded at the Inverness Show.

MEETING OF DIRECTORS, 3RD NOVEMBER 1948.

Mr JAMES R. LUMSDEN, C.B.E., of Arden, Dunbartonshire, in the Chair.

Present.—President—The Earl of Elgin and Kincardine, K.T., C.M.G., Broomhall, Dunfermline. *Ordinary Directors*—Mr J. W. Alexander, M.V.O.; Mr John L. Arnott; Mr William Brown; Mr Peter W. Crawford; Mr Archibald J. Elder; Captain Thomas Elliot, O.B.E.; Mr Peter Gordon; Mr Adam Gray; Mr William Hogg; Mr J. E. Kerr, C.B.E.; Mr James Kilpatrick; Mr James R. Lumsden, C.B.E.; Mr James M'Laren; Mr Alexander D. C. Main, B.Sc.; Mr J. C. Wallace Mann; Mr Ian C. Menzies, O.B.E.; Mr William Montgomery; Mr William J. Reid; Mr Thomas Graham Reid; Mr John L. Sleigh; Brigadier J. E. Stirling; Captain R. J. Thomson; Mr Francis W. Walker; Major A. L. P. F. Wallace; Mr R. H. Watherston; Mr Thomas A. Wedderspoon. *Extraordinary Directors*—Mr R. Scott Aiton, M.C.; Mr William Allison; Mr Thomas Clark; Captain James Craig; Mr James Durno; Mr Harry H. Edie; Mr John M. Fairlie; Mr John Niven; Mr John Provan; Sir J. Denby Roberts, Bt.; Captain Ian S. Robertson; Mr William D. Simpson; Mr J. Norman H. Steele, B.Sc.(Agric.); Mr Matthew Templeton; Mr James L. Whyte; Mr James Wither. *Treasurer*—Sir Joshua Ross-Taylor. *Honorary Secretary*—Major R. F. Brebner, C.B.E.

The late Major C. H. Scott Plummer, C.B.

Before proceeding with the business of the Meeting the Chairman referred, with deep regret, to the death of a former member and Chairman of the Board, Major C. H. Scott Plummer of Sunderland Hall, Selkirk. Major Scott Plummer, he said, became a member in 1885, so that his connection with the Society covered the remarkable period of sixty-three years. He first served on the Board in 1889 as an Extraordinary Director in connection with the Show at Melrose held that year. In 1895 he was elected an Ordinary Director, and thereafter served continuously on the Board up to 1917, a period of twenty-two years. He was Chairman of the Board in the years 1910 and 1911. He was also a Vice-President in the years 1926 and 1936.

Major Scott Plummer took a leading part in local government affairs in the County of Selkirk. For over fifty years he was Convener of the County Council, and for thirty years Lord-Lieutenant of Selkirkshire. His valuable services to the County were acknowledged when he was made a Freeman of Selkirk in 1937. His work on many public bodies was recognised when His Majesty The King conferred on him the honour of Companion of the Order of the Bath (C.B.) in 1944.

His long and valuable services as a member of the Board, while relating to a period outwith the remembrance of most of its present members, were duly recorded in the Proceedings of the Society, and were worthy of their grateful acknowledgment. His death was a loss to the Society and to the agricultural community of Scotland which they deeply regretted.

A Minute of regret and sympathy was submitted and adopted, the members present upstanding, and the Secretary was instructed to forward a copy to the family of the deceased.

The late Mr H. B. Marshall of Rachan.

The Chairman also referred, with regret, to the death of a former member of the Board, Mr H. B. Marshall of Rachan. Mr Marshall's connection with the Society, he said, covered the long period of fifty years, he having been elected a member in 1898. He served as an Extraordinary Director in 1906, the year of the Peebles Show, and as an Ordinary Director for four years—from 1910 to 1923.

Mr Marshall's early life was spent in South Africa, where he had an adventurous career, and eventually acquired important interests in gold mines, transport, and other businesses. A part of Johannesburg, Marshalltown, was named after him.

On returning to Scotland at the end of last century, he acquired the estate of Rachan, in Peeblesshire. He took an active part in the affairs of the County as a member of the County Council, of which he was for a long time Vice-Convener. He was also a Deputy-Lieutenant for the County.

During his term of office as a Director he took a practical interest in the affairs of the Society, and earned the regard and esteem of all the members of the Board. His passing would be learned of with regret by all who knew him.

A Minute of regret and sympathy was submitted and adopted, the members present upstanding, and the Secretary was instructed to forward a copy to the family of the deceased.

The Title "Royal."

The Chairman expressed the appreciation of the Directors of the great honour conferred on the Society by His Majesty The King at the Inverness Show by granting the Society the privilege of using the title "Royal." This, he said, had been the King's own idea, and came as a pleasant surprise to them all.

In confirmation of the grant, the following letter had been received :—

SCOTTISH HOME DEPARTMENT,
ST ANDREW'S HOUSE,
EDINBURGH 1,

12th July 1948.

SIR,

In the course of Their Majesties' recent visit to the Highland and Agricultural Society's Show at Inverness on the 24th June, His Majesty The King was graciously pleased to confer on the Society the privilege of using the title "Royal."

In accordance with His Majesty's commands, I have now been directed by the Secretary of State to send you this letter in formal confirmation of the grant of this privilege.

I am, Sir,

Your obedient Servant,

C. C. CUNNINGHAM.

Chairman of the Board for 1948-1949.

Sir Joshua Ross-Taylor, Mungoswells, Duns, moved that Mr James R. Lumsden of Arden be re-elected Chairman of the Board for the ensuing year. In doing so, Sir Joshua said there was rather a difficult year ahead of them, and, in view of the fact that the Secretary was retiring in the New Year, they would be well advised to re-elect Mr Lumsden, who was familiar with the duties.

Mr James Durno, Uppermill, Tarves, seconded, and Mr Lumsden's election was unanimously agreed to.

Mr Lumsden, in accepting office, thanked the Directors for the honour they had again conferred upon him. He said he would be glad to do his best for another year in the exceptional circumstances mentioned by Sir Joshua, and he would use his best endeavour to make the Dundee Show a great success.

Inverness Show, 1948.

Accounts.—The Treasurer of the Society, Sir Joshua Ross-Taylor, stated that he was very pleased to be able to tell the Meeting that, instead of having incurred a considerable financial loss at Inverness, they would have a profit. He could not give any figures at that time, as the Accounts had not been completed, but he would be able to present them at the next Meeting in December.

List of Awards.—A list of Awards at Inverness Show was laid on the table.

Dundee Show, 1949.

Judges.—The following were appointed a Selection Committee to draw up Panels of Judges for consideration at next Meeting: Mr J. W. Alexander, Major R. F. Brebner, Captain James Craig, Mr James Durno, Mr Archibald J. Elder, Captain Thomas Elliot, Mr J. E. Kerr, Mr James Kilpatrick, Mr James R. Lumsden, Mr John Niven, Captain Ian S. Robertson, Sir Joshua Ross-Taylor, Mr William D. Simpson, Mr Matthew Templeton, Mr James Wither.

Forage Committee.—The following Committee was appointed to make arrangements for the supply of forage and report to the Board: Mr Francis W. Walker (*Convener*), Mr Thomas Clark, Mr John M. Fairlie, Mr J. E. Kerr, Mr James R. Lumsden, Mr W. J. Reid, Mr Thomas A. Wedderspoon, Mr James L. Whyte.

Hotel Accommodation and Catering in Showyard.—It was remitted to the Chairman of the Board, the Convener of the Shows Committee, the Convener of the Local Committee, the Steward of Catering, the Steward of Implements, Treasurer, Honorary Secretary, and the Secretary to make the necessary arrangements.

Police.—It was remitted to the Secretary to make the necessary arrangements for Police supervision in the Showyard.

Music.—The Secretary was instructed to make the necessary arrangements for music in the Showyard.

Forestry Exhibition.—It was agreed that accommodation be granted to the Royal Scottish Forestry Society for an exhibition of timber, and that a grant of £40 be given towards the expenses of the Exhibition.

Prize List and Regulations.—The Secretary stated that the Shows Committee had met on 2nd November and had revised the Prize List and Regulations for the Dundee Show.

It was agreed that, as usual, their Report be circulated for consideration in detail at next Meeting of the Board.

Special Prizes.—A number of Special Prizes were accepted and votes of thanks accorded to the donors.

Show of 1950.

The Chairman reported that an invitation had been received from the Corporation of Glasgow to hold the Show of 1950 at Bellahouston Park. The Town Council of Paisley had also written offering alternative sites—at St James' Park, where the Show was held in 1913, and at Barshaw Park. A communication had also been received from the Town Council of Ayr, inquiring as to the extent of ground required.

The following were appointed a Sites Committee to visit and inspect the various suggested sites, and report: Mr James R. Lumsden, Sir Joshua Ross-Taylor, Major R. F. Brebner, Mr W. D. Simpson, Mr T. A. Wedderspoon, and Sir Guy Shaw-Stewart, Bt.

Improvement of Livestock.

Major R. F. Brebner and Mr James Wither reported on the proceedings at a meeting on 4th June, called by the Department of Agriculture, to consider suggestions for amendment of the Regulations under the Improvement of Livestock (Licensing of Bulls) Act, 1931.

Major Brebner said that the principal discussion centred round a suggestion that the Rules should be tightened up so that, in the case of beef breeds, only pedigree bulls should be licensed, and, in the case of dairy breeds, only milk-recorded animals. It was felt, however, that the time was not ripe to adopt that proposal because of the scarcity of bulls in the country. Restrictions might come into force, but they would have to wait some time. A further meeting would be held.

Contagious Abortion.

The Secretary reported that an invitation had been received from the National Farmers' Union of Scotland to appoint representatives to attend a meeting on 27th September regarding the control of contagious abortion, and particularly as to the use of Strain 19. Major R. F. Brebner and Mr William Hogg had attended the meeting as representatives of the Society.

Mr William Hogg said they had heard a lecture from Professor Ritchie on the uses of Strain 19 vaccine, and from Professor Dalling on Strain 19 and its results as studied by research. The main conclusions were that the use of Strain 19 had been of great value in preventing the spread of contagious abortion amongst cattle, and that it was desirable that the compulsory use of Strain 19 should be imposed, although the time was hardly ripe to adopt such a method. One point made was that inoculated animals would not transmit the disease to non-inoculated animals. With regard to the export trade, it was thought desirable that there should be some recognised standardisation of tests by the importing countries. Trouble was caused in many cases through heifers being inoculated in calfhood with Strain 19, and, when tested for export, they were found to react. Some countries did not wish their animals to be inoculated. In the meantime, it was thought that all those interested in the export trade should defer inoculation until such time as they had selected those they were going to sell and those they intended to retain in their own herds. One piece of conclusive information given was that the blood test was now of a uniform standard in all laboratories.

Marketing of Livestock and Meat.

A letter was submitted from the Scottish Council (Development and Industry) inviting the Society to appoint representatives to attend a meeting to be held at St Andrew's House on 4th November to consider the question of the Marketing of Livestock and Meat. Mr W. D. Simpson and Mr J. C. Wallace Mann were nominated as the Society's representatives to attend the meeting.

Mr W. D. Simpson said he would be pleased to attend the meeting, but would like some guidance from the Directors as to their views. As a Cattle Grader from the inception of the scheme until recently, he was satisfied with the present method of marketing fat cattle. From the producer's point of view, he thought it was probably the best that could be got. He thought, however, that a little more emphasis should be placed on quality.

After several speakers had stated their views, it appeared that the members of the Board were unanimous in supporting the views expressed by Mr Simpson.

Resignation of Secretary.

The Chairman said he would like to refer to a matter which was not on the Agenda. They had been very sorry to learn from Mr Stirton after the Inverness Show that, owing to the state of his health, he felt he should now relinquish his office as Secretary to the Society. The Chairman said he did not propose to go into a long eulogy at this time, as Mr Stirton was not leaving immediately. He was prepared to carry on until they had a new Secretary appointed.

Mr Stirton had been appointed as far back as 1912 to be Secretary of the Society, and he was sure that the Boards of Directors which he had served since that day had had no reason to regret that appointment. Throughout the years Mr Stirton had been a tower of strength to the Society and a great help to the various Boards of Directors. He was sure he voiced the feelings of all when he said how very much they regretted that the time had come for him to relinquish his appointment. They all wished him long life and happiness in his retirement.

Finance.

Minutes of Meetings of Committee, dated 15th September and 3rd November, were submitted and approved. The Minutes dealt, *inter alia*, with the following matters :—

Portrait of Mr Andrew Meikle.—A letter was read from Mr E. H. Wishart, of Messrs Bonar, Hunter & Johnstone, W.S., asking the Society to accept an Oil Painting of Andrew Meikle, the inventor of the threshing machine, along with certain relative drawings.

It was agreed to recommend that the portrait be accepted and that the thanks of the Society be expressed to Mr Wishart.

Appointment of Secretary.—The Convener reported that fifty-eight Applications had been received for the post of Secretary. As instructed by the Committee at their Meeting on 15th September, a Sub-Committee had made a preliminary examination of the Applications and had selected a list of seven names. The Applications and Testimonials of these seven were handed to the members of the Committee present.

It was agreed to report to the Board of Directors the steps which had already been taken by the Committee, and to leave it to the Board to decide whether further consideration should be left in the hands of the Finance Committee or if the Board wished to appoint a special *ad hoc* Committee.

With regard to the appointment of Secretary, it was moved by Captain Ian S. Robertson and seconded by Mr R. Scott Aiton that further consideration of the List of Applicants be left in the hands of the Finance Committee, and that the Committee be asked to bring a reduced list of not less than three before the Board at its next Meeting. This was agreed to.

Erection of Showyard.

On the motion of Sir Joshua Ross-Taylor, it was remitted to the Finance Committee to consider what change, if any, was desirable in the arrangements for erection of the Showyard, and to report.

Stirling Show Division.

Mr Thomas G. Reid, Netherton, Bridge of Allan, stated that there was a movement in the Stirling area to secure that the next Show in that Division be held in the King's Park, Stirling. Proposals had been put forward for levelling operations which would render the site suitable. He asked that the Chairman, Secretary, and Master of Works should agree to inspect the site, if invited to do so by the Town Council. This was agreed to.

MEETING OF DIRECTORS, 1st DECEMBER 1948.

Mr JAMES R. LUMSDEN, C.B.E., of Arden, Dunbartonshire, in the Chair.

Present.—President—The Earl of Elgin and Kincardine, K.T., C.M.G., Broomhall, Dunfermline. *Ordinary Directors*—Mr J. W. Alexander, M.V.O.; Mr John L. Arnott; Mr William Brown; Mr Peter W. Crawford; Mr Archibald J. Elder; Captain Thomas Elliot, O.B.E.; Mr Peter Gordon; Mr Adam Gray; Mr William Hogg; Mr J. E. Kerr, C.B.E.; Mr James Kilpatrick; Mr William H. Lawson; Mr James R. Lumsden, C.B.E.; Mr James M'Laren; Mr J. C. Wallace Mann; Mr Ian C. Menzies, O.B.E.; Mr Thomas Graham Reid; Lieut.-Colonel Sir Guy Shaw-Stewart, Bt., M.C.; Mr John L. Sleigh; Brigadier J. E. Stirling; Captain R. J. Thomson; Mr Francis W. Walker; Mr R. H. Watherston; Mr Thomas A. Wedderspoon. *Extraordinary Directors*—Mr R. Scott Aiton, M.C.; Mr William Allison; Mr W. Belfrage Black; Captain James Craig; Mr James Durno; Mr John M. Fairlie; Mr William Montgomery; Mr John Provan; Captain Ian S. Robertson, M.C.; Mr Francis W. Roger; Mr William D. Simpson; Mr J. Norman H. Steele, B.Sc.(Agric.); Mr Matthew Templeton; Mr James L. Whyte; Mr James Wither. *Treasurer*—Sir Joshua Ross-Taylor. *Honorary Secretary*—Major R. F. Brebner, C.B.E.

The late Sir Iain Colquhoun, Bt., of Luss.

Before proceeding with the business of the Meeting, the Chairman referred, with deep regret, to the death of Lieut.-Colonel Sir Iain Colquhoun, Bt., K.T., D.S.O., of

Luss. Sir Iain, he said, was a member of the Society during the past twenty years, and was a Vice-President in 1929 and 1937, these being years in which the Annual Show was held at Alloa.

It would be impossible, he said, to enumerate the many spheres of public life in which Sir Iain played a notable part. To mention only a few, he had a distinguished career in the Army during the First World War, when he was awarded the D.S.O. and Bar, retiring in 1920 with the rank of Lieut.-Colonel; he was on three occasions Lord High Commissioner to the General Assembly of the Church of Scotland; he was interested in all forms of sport and, as Chairman of the National Advisory Council on Physical Training and Recreation, he took a keen interest in the welfare of the youth of the country; and he was Grand Master Muson of Scotland in 1939.

His charm of manner and attractive personality, and his sincere sympathy with all good causes, secured for him widespread popularity among his fellow-men in every walk of life. He held a distinctive place in the life of Scotland and was held in the highest esteem and regard by all who knew him. In his death the country had lost a great Scotsman, and one whose noble and outstanding record of service would not soon be forgotten.

A Minute of regret and sympathy was submitted and adopted, the members present upstanding, and the Secretary was instructed to forward a copy to the widow and family of the deceased.

Appointment of Secretary.

The Chairman reported that the Board of Directors, sitting in Committee the previous day, had unanimously decided to appoint Mr Richard M. Lemmon, B.L., Solicitor, Aberdeen, to the position of Secretary of the Society and Editor of the Society's 'Transactions.' He felt sure that Mr Lemmon would uphold the traditions of the Society during his term of office, and they wished him the best of luck in his appointment.

Dundee Show, 1949—Report of Sites Committee.

The Chairman reported that the Sites Committee had visited Dundee on 29th November, when they met the Special Committee appointed by the Dundee Corporation to make arrangements for the Dundee Show. The following is a summary of the decisions arrived at :—

- (a) The Society to be given an area of 50 acres or thereby of level ground at Riverside Park as a Showground, the Corporation to undertake the suitable levelling of the ground; entry to the Showground to be given on 1st March 1949.
- (b) The Society to be given the use of approximately 20 acres to the west of the Showground for use as a Car Park, in addition to approximately 15 acres on the north side of the Esplanade which would also be used as a Car Park.
- (c) The Corporation to make no charge for the supply of water to the Showground, for cleansing services, or for the cost of Police supervision within the Showground.
- (d) The Corporation would not accept responsibility for Car Park arrangements in connection with the Show.

Regulations and Prize List.

A Report of the Shows Committee, dated 2nd November 1948, which had been printed and circulated, was submitted and considered in detail.

The following were the principal points dealt with :—

Rule 34.—It was decided that the regulation that Draught Yeld Mares must produce a foal not later than 1st August of the year following the year of the Show be deleted.

Increased Prize-Money.—In accordance with a remit from the Shows Committee, the Finance Committee had considered the question of increasing the prize-money to be offered at the Show. They had prepared a statement showing suggested average increases of from 30 to 33½ per cent on the Inverness rates. The recommendation was generally approved, it being understood that the figures in the individual classes would be worked out by the Secretary, and would appear in the proof of the Prize List to be submitted to the Board of Directors at the February Meeting.

Jersey Cattle.—On a letter from the Breed Society, it was decided that the classes for Jerseys be as follows :—

Cow, in milk, which has produced two or more calves.

Heifer, in milk, which has produced her first and only calf at under the age of 2½ years.

Cow dry and in-calf, any age.

Bull, any age.

Hunters.—On behalf of the Sub-Committee appointed at last Meeting, Mr R. Scott Aiton submitted a recommendation that the classes for Hunters be as at Inverness.

Riding Ponies.—Mr Scott Aiton reported that the Sub-Committee had considered the suggestion made by Miss G. M. L. Stewart, Arndean, Dollar, and had agreed to recommend that the following two in-hand classes be provided :—

Pony Mare, 14 hands or under, with foal at foot or in foal—Premiums, £5, £3, £2.
Pony, one, two, or three years old, 13.2 hands or under—Premiums, £5, £3, £2.

These ponies to be exhibited on one day only.

Rural Industries.—A letter was submitted from the Central Council, Scottish Women's Rural Institutes, forwarding suggestions for a revised Schedule of Classes in the Rural Industries Section. These suggestions were generally approved.

Scottish Association of Young Farmers' Clubs.—A letter was submitted from the Secretary of the Association stating that that body had appointed a Sub-Committee to deal with matters relating to the arrangements for a Stand and Young Farmers' Club Contests and Demonstrations at the Show, and suggesting that a few of the Directors should agree to meet them for discussion.

It was decided to ask the Association to submit their proposals in writing, and the following Committee of Directors was appointed to consider these proposals and, if necessary, meet with the Sub-Committee of the Young Farmers' Association—Captain James Craig, Mr J. E. Kerr, Mr J. C. Wallace Mann, Mr Ian C. Menzies, Mr W. D. Simpson, Mr John L. Sleigh, Mr J. Norman H. Steele, with the Chairman and Master of Works.

Rabbits.—A letter was submitted from the Dundee and District Fur and Feather Association in reply to the Society's inquiry as to the staging, pens, &c., which would be necessary for a show of Rabbits. The letter stated that there would be no difficulty in securing the number of show pens required, and that members of the Association would be prepared to assist in penning the exhibits, acting as Stewards, &c. A suggested classification, comprising 90 classes, was enclosed.

It was decided to approve generally of the proposal for Rabbit Classes, this Society to provide the necessary accommodation and staging, and the Fur and Feather Association to be responsible for all other arrangements in connection with the running of the section, the entry fees collected to be handed over to this Society, which would provide the prize-money.

Subject to the foregoing adjustments the Report of the Shows Committee was approved.

Convener of Local Committee.—On the motion of the Chairman it was unanimously agreed that the Earl of Airlie, K.T., G.C.V.O., M.C., Downie Park, Kirriemuir, be appointed Convener of the Local Committee of Management.

Appointment of Judges.—The Secretary reported that, at a Meeting of the Board in Committee on 30th November, Judges had been appointed for the various classes of Stock. These were being communicated with, and, after replies were received, the List of Judges would be published in the Press.

British Women's Temperance Association.—It was agreed to grant the British Women's Temperance Association a free site for an unlicensed Catering Stand.

Special Prizes.—A number of Special Prizes were accepted and votes of thanks accorded to the donors.

Marketing of Livestock and Meat.

A report on the Meeting convened by the Scottish Council (Development and Industry), and held at St Andrew's House on 4th November, was submitted by Mr W. D. Simpson, who represented the Society at the Meeting with Mr J. C. Wallace Mann. The Meeting was attended by representatives of the Retail Butchers, Wholesale Butchers, Auctioneers, and Breed Societies. Unfortunately, representatives of the National Farmers' Union were unable to be present. After the Butchers and Auctioneers had put forward their points of view, he had put forward the views of the Directors of the Society. These were that they approved the present system of grading on the hoof. At the same time he had pointed out that they felt that more attention should be paid to quality, and in that connection suggested that cattle over 14 cwt., or over-fat, should have 2s. 6d. deducted from the price per cwt., and that that money should be used to increase the price of high-quality well-bred animals between 10 and 13 cwt. There had been an astonishing amount of approval by following speakers of the proposals they had put forward.

At the conclusion of the Meeting a suggestion was made that a useful purpose would be served if the various organisations represented at, or invited to attend, the Meeting, set up a Committee to consider possibilities in connection with the Post-War Marketing of Livestock and Meat. It was agreed that the Scottish Council should write to the various organisations to obtain their views on this suggestion.

A letter to this effect, dated 15th November, had been received, and it was decided that Mr W. D. Simpson be appointed to represent the Society on the proposed Committee, if such were formed.

Stirling Show Division.

A letter was submitted from the Town Clerk of Alloa putting forward the claims of Alloa as a site for the next Show to be held in the Stirling Show Division.

The Secretary was instructed to reply that the claims of Alloa would receive due consideration when the time came for the Society to look out for a site for the Show of 1953.

Inspection of Growing Crops of Potatoes.

A letter was read from the Department of Agriculture inviting the Society to appoint representatives to attend a Meeting on 16th December to discuss the Scheme for the Inspection of Growing Crops of Potatoes in 1949.

It was decided that Mr W. D. Simpson, Highfield, North Berwick, Mr William Allison, Almond Hill, Kirkliston, and Captain Ian S. Robertson, Linkwood, Elgin, be appointed to represent the Society at the Meeting.

Hill Sheep Subsidy.

A letter was submitted from the National Farmers' Union of Scotland inviting the Society to appoint two representatives to attend a Meeting on 9th December for the purpose of considering the amount of the Hill Sheep Subsidy payment in respect of 1948.

Mr J. W. Alexander, M.V.O., Langshaw, Moffat, and Captain James Craig, Gwydyr House, Comrie Road, Crieff, were appointed to represent the Society at the Meeting.

Grants to Local Societies.

A Report by the Shows Committee, dated 1st December, relating to Grants to Local Societies, was submitted and approved.

The Committee recommended that (1) Grants under Class 1 (Show Premiums) be increased from £12 to £15, and (2) that Grants under Class 2 (Horse-Breeding) be increased from £15 to £20.

Finance.

A Minute of Meeting of Committee, dated 1st December, was submitted and approved. The Minute dealt, *inter alia*, with the following matter :—

Members' Subscriptions.—It was decided that Members elected before 1st December 1948 should have the option, up till 30th November 1949, of redeeming their annual subscription by payment of a Life Composition at the rates in operation before the change in the Bye-Laws became effective. After 30th November 1949 Life Compositions would be based on the new rates.

MEETING OF DIRECTORS, 5TH JANUARY 1949.

Mr JAMES R. LUMSDEN, C.B.E., of Arden, Dunbartonshire, in the Chair.

Present.—President—The Earl of Elgin and Kincardine, K.T., C.M.G. *Ordinary Directors*—Mr J. W. Alexander, M.V.O.; Mr John L. Arnott; Mr William Brown; Mr Peter W. Crawford; Mr Archibald J. Elder; Captain Thomas Elliot, O.B.E.; Mr Peter Gordon; Mr Adam Gray; Mr William Hogg; Mr J. E. Kerr, C.B.E.; Mr James R. Lumsden, C.B.E.; Mr James M'Laren; Mr J. C. Wallace Mann; Mr Ian C. Menzies, O.B.E.; Mr Thomas Graham Reid; Mr William J. Reid; Lieut.-Colonel Sir Guy Shaw-Stewart, Bt., M.C.; Mr John L. Sleigh; Captain Lt. J. Thomson; Mr Francis W. Walker; Major A. L. P. F. Wallace; Mr R. H. Watherston; Mr Thomas A. Wedderspoon. *Extraordinary Directors*—Mr R. Scott Aiton, M.C.; Mr William Allison; Mr William Belfrage Black; Mr Thomas Clark; Captain James Craig; Mr James Durno, C.B.E.; Mr William Montgomery; Mr John Niven; Mr John Provan; Captain Ian S. Robertson, M.C.; Mr William D. Simpson; Mr Matthew Templeton; Mr James Wither. *Treasurer*—Sir Joshua Ross-Taylor. *Honorary Secretary*—Major R. F. Brebner, C.B.E. *Auditor*—Mr George James Gregor, C.A.

The late Mr J. T. M'Laren, Stirling.

Before proceeding with the business of the Meeting the Chairman referred, with very deep regret, to the death, since their last Meeting, of a former member and Chairman of the Board, Mr J. T. M'Laren, Stirling. Mr M'Laren's membership of the Society, he said, covered the long period of sixty-three years, he having been elected a member in 1885. He became a Director in 1912 and continued to serve on the Board, with certain intervals, during the next twenty years. He was Chairman of the Board in 1924 and 1925, and a Vice-President in 1927.

During the period of his active association with the Board, Mr M'Laren occupied the position of Factor and Commissioner at Dalmeny. It was worthy of note that during his time the Earl of Rosebery won some of the leading honours for Shorthorn Cattle at the national Shows. Mr M'Laren was widely recognised as a sound judge of Shorthorns, and he officiated in that capacity at many of the principal Shows.

It was true to say that in his time Mr M'Laren was one of the most prominent personalities in Scottish Agriculture. His counsel and advice were widely sought on all matters relating to agriculture, and as a man he was held in the highest regard and esteem by all with whom he was associated.

He took a keen and practical interest in the affairs of the Society, and no one was more active in upholding its traditions and promoting its interests. His death was a loss which would be deeply deplored by a wide circle of friends.

A Minute of regret and sympathy was submitted and adopted, the members present upstanding, and the Secretary was instructed to forward a copy to the family of the deceased.

Marketing of Livestock and Meat.

As arising on the Minute of 1st December, Mr W. D. Simpson, Highfield, North Berwick, said a misunderstanding had arisen regarding his reference at that Meeting to the suggestion that cattle over 14 cwt., or over-fat, should have 2s. 6d. deducted from the price per cwt. What he had meant to indicate was that the deduction should be progressive—2s. 6d. for 14 cwt., 5s. for 15 cwt., 7s. 6d. for 16 cwt., and so on.

Stirling Show Division.

A letter was submitted from the Burgh Surveyor, Stirling, with regard to proposed levelling operations in the King's Park, Stirling. The letter was accompanied by a map showing the contours of the proposed levelling. The letter invited the Society's representatives to visit the King's Park in order to consider the proposal with the town officials.

It was agreed that, as already arranged, the Chairman and local members of the Board, together with the Secretary and Master of Works, should visit the ground on a suitable date. The Chairman said he would get in touch with the Town Clerk in order to fix upon a date which would be mutually suitable.

Dundee Show, 1949.

Stewards.—The principal Stewards of the various departments were appointed as follows: *Cattle*—Mr J. E. Kerr, C.B.E.; *Horses*—Mr George Grant; *Reserve*: Mr John L. Sleigh; *Sheep, Goats, and Pigs*—Captain James Craig; *Poultry and Rabbits*—Mr William Brown; *Forage*—Mr Francis W. Walker; *Implements*—Mr William D. Simpson; *Flower Show*—Mr J. C. Wallace Mann; *Special Events*—Mr John Niven; *Grand Stands*—Mr R. Scott Aiton, M.C.; *Gates*—Mr James Wither; *Catering, Bees, Honey, &c.*—Mr William Montgomery.

Horse-Shoeing Competition.—The following were appointed members of the Committee of Management of the Horse-Shoeing Competition, to act along with three members of the local Blacksmiths' Association: Mr Peter W. Crawford, Mr Adam Gray, and Mr T. G. Reid.

Hackney Classes.—A letter was submitted from the Secretary of the Hackney Horse Society, in which he pointed out that, unfortunately, the dates of the Show clashed with those of the Royal Counties Show at Reading, with which the Hackney Horse Society holds its Hackney Classes. In view of this, it was decided that the proposal to include Hackney Classes at the Show be not proceeded with.

Hill Cattle.—A letter was submitted from Mr William Hogg containing suggested conditions for a Competition for Beef Breeding Herds of Hill Cattle within the Show Division. A draft of the proposed conditions as they would appear in the Prize List was submitted, and, after some emendation, was approved.

Judging of the herds entered would take place on the farms between 15th August

and 15th September. The following were nominated as Judges : Mr A. Watt Taylor, Philorth ; Mr John A. Cameron, Balbuthie ; The Lord Lovat, D.S.O., M.C., Beaully Castle ; *Reserve* : Mr John Glendinning, Lockerbie.

Forestry Exhibition.—On an application from the Royal Scottish Forestry Society, it was decided that the free stand granted should extend to 60 ft. in length, this to form half of a 120-ft. stand to be occupied by that Society and the Forestry Commission.

Catering.—A Minute of Meeting of Catering Committee, dated 4th January, was submitted and approved.

The Minute stated that the Committee had discussed, in a preliminary manner, various matters connected with the hotels and catering arrangements at the Show. With regard to catering, it was proposed that three main Catering Stands should be provided, instead of two. It was also proposed that there be a Luncheon Pavilion, with Cocktail Bar, for Members only, and that the Snack Counter between the Members' and Lady Members' Pavilions be restricted to providing light refreshments, with tea and coffee.

Special Prizes.—A number of Special Prizes were accepted and votes of thanks accorded to the donors.

Inspection of Growing Crops of Potatoes.

Mr William D. Simpson, Highfield, North Berwick, submitted a report on the proceedings at a Conference regarding the Scheme for the Inspection of Growing Crops of Potatoes, held at St Andrew's House on 16th December 1948. The Society was represented at the Conference by Mr Simpson, Mr William Allison, Almond Hill, Kirkliston, and Captain Ian S. Robertson, Linkwood, Elgin.

In speaking to the report, Mr Simpson referred to certain points therein. During the season 1948, 128,000 acres of potatoes had been inspected by the Department of Agriculture Inspectors. This was 9000 acres more than in 1947. There was agreement that only crops grown from foundation stocks, or from stock seed, should be eligible for inspection for stock seed certificates.

Following on the above report, a letter was read from the Department of Agriculture, dated 31st December, to the effect that no change would be made in the inspection scheme for the 1949 crop in connection with the problem of eelworm. As regards the derivation of stock seed, a decision had been taken that, in 1949, no crops grown from Grade A. seed would be accepted for stock seed inspection.

The Society's representatives were thanked for their report.

Hill Sheep Subsidy.

Mr J. W. Alexander, M.V.O., Langshaw, Moffat, reported that he had attended a Meeting on 9th December, called by the National Farmers' Union of Scotland, with regard to the amount of the Hill Sheep Subsidy for the past year. Delegates from the Meeting afterwards met with officials of the Department of Agriculture, when the figures agreed upon were submitted and discussed. The proceedings were confidential, and an announcement would appear later regarding the figure decided upon.

The Chairman thanked Mr Alexander for his report.

Education.

A Minute of Meeting of Education Committee, dated 5th January, was submitted and approved.

Show of 1951.

Mr James Durno, C.B.E., Uppermill, Tarves, moved the following resolution :—

"That, provided a suitable site is available and satisfactory financial and other arrangements can be made, the Society's Show of 1951 be held in the Aberdeen Show Division."

The motion was unanimously adopted.

Scottish Agricultural Organisation Society, Ltd.

On the motion of Sir Joshua Ross-Taylor, Treasurer, it was unanimously agreed to confirm the proposed grant of £100 to the Scottish Agricultural Organisation Society, Ltd., for the year 1949.

Finance.

Minutes of Meetings of Finance Committee, dated 4th and 5th January, were submitted and approved. The Minutes dealt, *inter alia*, with the following matters :—

Showyard Erector.—It was decided to recommend that Messrs Alexander Hall & Son, Ltd., 15 Mid Stocket Road, Aberdeen, be appointed Showyard Erectors for a period of one year, in place of Mr Frank Reid. The salary of the post would be £1000 for the first year.

T. H. Middleton Memorial.—It was recommended that the Society give a donation of £10 to the T. H. Middleton Memorial Fund.

Royal Scottish Agricultural Benevolent Institution.—It was recommended that a grant of £100 be given to the Royal Scottish Agricultural Benevolent Institution for the year 1949.

Chief Clerk.—A letter was submitted from Mr T. W. Russell, Chief Clerk to the Society, intimating his resignation of his office in view of his appointment as Secretary and Treasurer of the Rosslynlee Hospital Group Board of Management.

It was agreed that his resignation be accepted with regret.

Secretary's Retiring Allowance.—The Committee recommended that the Society grant a mandate to the Scottish Widows' Fund authorising that Society to pay the half-yearly instalments under the Deferred Annuity Policy, No. 401468, direct to Mr Stirton. This Policy was taken out by the Society in 1914 with the object of providing for an annuity of £200 per annum, to commence when the Secretary attained the age of sixty-five.

With regard to a further Annuity, Mr Menzies had reported that discussion had taken place with the Scottish Widows' Fund regarding a Joint Term and Life Annuity for Mr Stirton and his wife. It was recommended that it be remitted to Sir Joshua Ross-Taylor, Mr James R. Lumsden, Major R. F. Brebner, and Mr Ian C. Menzies, with powers, to consider further as to the advisability of making this provision by means of a Policy, or otherwise, and to take the necessary action.

MEETING OF DIRECTORS, 2ND FEBRUARY 1949.

Mr JAMES R. LUMSDEN, C.B.E., of Arden, Dunbartonshire, in the Chair.

Present.—President—The Earl of Elgin and Kincardine, K.T., C.M.G. *Ordinary Directors*—Mr J. W. Alexander, M.V.O.; Mr Thomas Black; Mr William Brown; Mr Peter W. Crawford; Mr Archibald J. Elder; Captain Thomas Elliot, O.B.E.; Mr Peter Gordon; Mr Adam Gray; Mr William Hogg; Mr J. E. Kerr, C.B.E.; Mr James Kilpatrick; Mr William H. Lawson; Mr James R. Lumsden, C.B.E.; Mr James M'Laren; Mr Alexander D. C. Main, B.Sc.; Mr J. C. Wallace Mann; Mr Ian C. Menzies, O.B.E.; Mr Thomas Graham Reid; Mr William J. Reid; Lieut.-Colonel Sir Guy Shaw-Stewart, Bt., M.C.; Mr John L. Sleigh; Brigadier J. E. Stirling; Mr Francis W. Walker; Major A. L. P. F. Wallace; Mr R. H. Watherston; Mr Thomas A. Wedderspoon. *Extraordinary Directors*—Mr R. Scott Aiton, M.C.; Mr William Allison; Mr Thomas Clark; Captain James Craig; Mr James Durno, C.B.E.; Mr Harry H. Edie; Mr John M. Fairlie; Mr A. W. Howison; Mr William Montgomery; Mr John Provan; Captain Ian S. Robertson, M.C.; Mr William D. Simpson; Mr J. Norman H. Steele, B.Sc.; Mr Matthew Templeton; Mr James L. Whyte; Mr James Wither. *Treasurer*—Sir Joshua Ross-Taylor. *Honorary Secretary*—Major R. F. Brebner, C.B.E.

The late Lord Provost Powrie, Dundee.

Before proceeding with the business of the Meeting the Chairman referred, with very deep regret, to the death of Lord Provost Archibald Powrie of Dundee, one of the Vice-Presidents of the Society.

When, he said, it was decided in 1947 that the Show be held at Dundee in 1949 the Directors unanimously agreed that Lord Provost Powrie be invited to accept office as a Vice-President. The high esteem in which he was held by all sections of the population, and the efficient manner in which it was known he had filled many high offices in the city, left no room for doubt that his interest and co-operation would be of the utmost value to the success of the Show.

His untimely death, therefore, came as a sad loss, not only to the Society, but to the citizens of Dundee, and especially to all with whom he was associated in the advancement of the well-being and progress of the city.

A Minute of regret and sympathy was submitted and adopted, the members present upstanding, and the Secretary was instructed to forward a copy to the widow of the deceased.

The late Mr William I. Elliot, Middletoun, Stow.

The Chairman also referred, with very deep regret, to the death of a former member of the Board, Mr William I. Elliot, Middletoun, Stow. Mr Elliot, he said, joined the Society in 1903, and was elected a Director in 1936. Following election he served for a period of six years, and again for a period of two years in 1946-47.

Mr Elliot was a recognised authority on all branches of hill farming, and he took a prominent part in securing that the interests of Hill Sheep Farmers were kept before the notice of the Government and the public. He was widely known as a breeder and judge of Cheviot Sheep, of which he maintained a noted flock at Glenries, Sanquhar. At Middletoun he kept a Cheviot flock for the breeding of Half-Bred Sheep.

During his membership of the Board Mr Elliot took a keen interest in the business of the Society. In all discussions relating to hill farming his views invariably carried weight. His wide knowledge and experience were ever available to all engaged in the industry, and his cheerful and kindly disposition earned for him the esteem and regard of a wide circle of friends and associates, by whom his death would be deeply mourned.

A Minute of regret and sympathy was submitted and adopted, the members present upstanding, and the Secretary was instructed to forward a copy to the widow and family of the deceased.

Livestock Export Group.

A letter was submitted from the Secretary of the Livestock Export Group inviting the Society to appoint a representative on the General Committee of the Group.

It was decided to appoint Mr William Hogg, Clackmae, Earlstoun, as the Society's representative.

Science.

A Minute of Meeting of Science Committee, dated 2nd February, was submitted and approved. The Minute dealt with the following matters:—

Schedule of Unit Values.—The Schedule of Unit Prices of Manures and Feeding-Subs had been revised as at that date, and it was recommended that it be printed and issued as usual.

Table of Unexhausted Manures and Feeding-Subs.—It was recommended that the Table of Unexhausted Manures and Feeding-Subs be reissued, and that it be remitted to Mr John E. Ritchie, M.A., B.Sc., Aberdeen, to revise it in terms of the average Unit Values for the year.

Dundee Show, 1949.

Veterinary Inspector.—Mr John J. Murdoch, M.R.C.V.S., 76-78 Ward Road, Dundee, was appointed Veterinary Inspector for the Show on the usual conditions.

Assistant Stewards.—Assistant Stewards of the various departments were appointed as follows: *Cattle*—Mr William Hogg; *Horses*—Mr T. Graham Reid; *Sheep, Goats, and Pigs*—Captain Thomas Elliot, O.B.E.; *Forage*—Mr William Allison; *Implement*—Mr Thomas A. Wedderspoon; *Special Events*—Mr Alexander D. C. Main, B.Sc.; *Grand Stands*—Mr Archibald J. Elder; *Gates*—Mr J. W. Alexander, M.V.O.; Captain Ian S. Robertson, M.C.; *Catering, Bees, Honey, &c.*—Mr William J. Reid.

It was further decided to appoint Mr James M'Laren, Alton, Stirling, as Principal Steward of Car Parks, and Mr Thomas Black, Balg, Doonfoot, Ayr, and Mr W. Belfrage Black, Holton House, Milnathort, as Assistant Stewards.

Forage.—A Minute of Meeting of Forage Committee, dated 2nd February, was read and approved.

The Minute stated that two Tenders had been received to supply forage for the Show, and the Committee recommended the acceptance of the offer by the Forage Supply Co. Ltd., Springfield Mills, Leith.

Free Stands.—A list of applications for free stands was submitted. The list was considered in detail, adjusted, and approved.

Catering.—A Minute of Meeting of Catering Committee, dated 1st February, was submitted and approved.

The Minute recommended that there be three main catering stands at the Show these being in the hands of the following :—

The Royal Athenæum, Ltd., Union Street, Aberdeen.
William Murray & Sons (Bakers) Ltd., Westmoreland Street, Fochabers.
Dundee Pasteurized Milk Co. Ltd., 62 Mains Road, Dundee.

There would be the usual unlicensed catering stand in the hands of the British Women's Temperance Association.

It was also decided to arrange for three mobile canteens.

Times of Judging and Parades.—The Secretary reported that a Meeting of Stewards had been held on 1st February, when the times of Judging and Parades were considered and fixed.

Proof of Prize List.—A proof of the Prize List and Regulations was submitted and considered in detail. Various emendations were made, and the Prize List and Regulations were approved for publication.

Percheron Horses.—It was decided to appoint Mr Allan L. Alston, Green Farm, East Tuddenham, East Dereham, Norfolk, as Judge of Percheron Horses, with Mr F. Newton Pratt, Morston Hall, Trimley, Ipswich, as Reserve.

Rural Industries.—The following were appointed to act as Judges : Miss Bruce, Highland Home Industries, Ltd., 111 George Street, Edinburgh ; Miss E. W. Thompson, 5 London Street, Edinburgh ; Miss Kinmond, Needlework Development Scheme, 89 Wellington Street, Glasgow.

Horse-Shoeing and Shoe-Making.—The following were appointed Judges of Shoe-making : Mr William Stephen, 6 Manse Terrace, Turriff, and Mr George G. Crichton, Livery Street, Bathgate, with Reserve, Mr William Johnson, Pitscottie, Cupar, Fife.

The Judges of Horse-Shoeing would be the two Judges of Shoe-Making, along with the Veterinary Inspector, Mr John J. Murdoch, M.R.C.V.S.

Rabbits.—The following were appointed Judges : *Fancy Varieties*—Mr R. M. Allardice, 167 Main Street, Overton, Wishaw ; *Normal Fur Varieties*—Mr J. Fowler, 106 Beatty Crescent, Kirkcaldy ; *Rex Varieties*—Mr F. G. Woodgate, Idle, Bradford.

Special Prizes.—A number of Special Prizes were accepted, and votes of thanks accorded to the donors. These included the following :—

Lady MacRobert of Downside.—Perpetual Challenge Silver Bell for the best animal in the British Friesian Cattle Classes, bred by Exhibitor, with a replica each year to the winner.

Mr Robert C. Paterson, Greenshields, Carnwath.—Silver Challenge Cup, to be known as "The Charles Cadzow Memorial Cup," value £150, for best Group of Four Blackface Sheep, consisting of ram (two shear or over), shearling ram, ewe, and gimmer. "Extra Stock" eligible to compete. The Cup to become the property of an Exhibitor who shall win it five times, not necessarily in succession.

Show of 1951.

It was decided that the following be appointed a Committee to visit and inspect proposed sites for the Show of 1951, and report : Major R. F. Brebner, C.B.E. ; Mr James Durno, C.B.E. ; Mr James R. Lumsden, C.B.E. ; Mr William J. Reid ; Captain Ian S. Robertson, M.C. ; Sir Joshua Ross-Taylor ; Mr John L. Sleigh ; Major A. L. P. F. Wallace ; and Mr T. A. Wedderspoon.

Royal Scottish Agricultural Benevolent Institution.

On the motion of the Treasurer, Sir Joshua Ross-Taylor, it was agreed to confirm the grant of £100 to the Royal Scottish Agricultural Benevolent Institution for the current year.

Scottish Council (Development and Industry).

A letter from the Scottish Council (Development and Industry) with regard to the appointment of an Agricultural Equipment Sub-Committee was submitted, inquiring as to whether the Society would be prepared to co-operate in supporting financially the Council's work with respect to agricultural equipment.

It was decided that the matter be remitted to the Finance Committee, with powers.

Improvement of Livestock.

Mr James Wither, Awhirk, Stranraer, reported on a Conference convened by the Department of Agriculture on 27th January with regard to the amendment of the existing Regulations under the Improvement of Livestock (Licensing of Bulls) Act, 1931.

He had attended the Conference as representing the Society along with Major R. F. Brebner. A full discussion had taken place, but matters had not yet reached the stage at which a definite statement could be made.

Mr Wither and Major Brebner were thanked for their attendance and for the report.

Argentine Ban on Imports.

Mr William J. Reid initiated a discussion on the recent Argentine ban on imports, and emphasised the serious repercussions which this measure would undoubtedly have on the forthcoming Livestock Sales in Perth.

After discussion it was agreed to forward a telegram in the following terms to the Prime Minister, with a copy thereof to the Secretary of the Department of Agriculture for Scotland :—

" 2nd February 1949.

THE PRIME MINISTER, 10 Downing Street, London.

The Directors of the Royal Highland and Agricultural Society of Scotland have learned with grave concern of the embargo placed on imports into the Argentine. In view of the Pedigree Sales of Cattle in Scotland in the next two weeks, from which many animals go to the Argentine, they ask you to bring the matter to the immediate notice of the Minister of Agriculture, the Secretary of State for Scotland, and the Chancellor of the Exchequer, with a view to having the embargo lifted.

(Signed) R. M. LEMMON, *Secretary.*"

Finance.

A Minute of Meeting of Committee, dated 2nd February, was submitted and approved. The Minute dealt with the following matters :—

Turnstiles.—It was decided to accept a Tender of £271, 19s. for the supply of six " A " type Convex Arm Registering Turnstiles by Messrs W. T. Ellison & Co. Ltd., Salford.

Directors' Show Badges.—It was decided to accept a Tender by Messrs Kirkwood & Son of £169, 15s. for making the necessary alterations in the Directors' Show Badges, entailed through the addition of the words " The Royal."

MEETING OF DIRECTORS, 2ND MARCH 1949.

Mr JAMES R. LUMSDEN, C.B.E., of Arden, Dunbartonshire, in the Chair.

Present.—Ordinary Directors—Mr J. W. Alexander, M.V.O.; Mr John L. Arnott; Mr Peter W. Crawford; Captain Thomas Elliot, O.B.E.; Mr Peter Gordon; Mr William Hogg; Mr William H. Lawson; Mr James R. Lumsden, C.B.E.; Mr James M'Laren; Mr Alexander D. C. Main, B.Sc.; Mr J. C. Wallace Mann; Mr Ian C. Menzies, O.B.E.; Mr William J. Reid; Mr John L. Sleigh; Captain R. J. Thomson; Mr R. H. Watherston; Mr Thomas A. Wedderspoon. *Extraordinary Directors*—Mr R. Scott Aiton, M.C.; Mr William Allison; Mr William Belfrage Black; Captain James Craig; Mr James Durno, C.B.E.; Mr William Montgomery; Captain Ian S. Robertson, M.C.; Mr William D. Simpson; Mr J. Norman H. Steele, B.Sc.; Mr James Wither. *Treasurer*—Sir Joshua Ross-Taylor. *Honorary Secretary*—Major R. F. Brebner, C.B.E.

The late Mr George Grant of Glenfarclas.

Before proceeding with the business of the Meeting the Chairman referred, with very deep regret, to the death, since last Meeting, of a member of the Board, Mr George Grant of Glenfarclas, Blacksoat.

Mr Grant, he said, joined the Society in 1898. He was appointed a Director in 1928 and continued as an Ordinary and Extraordinary Director without a break up to the date of his death. Throughout these years he took a keen and personal interest in the work of the Board, having served on all the Standing Committees, and until his recent illness he seldom missed a Meeting. For many years he played a prominent part at the Society's Annual Shows, and his genial personality would in future be missed by many in the Horse Section, where he acted so ably as Steward since 1928.

Much as they would miss his counsel in the Society, George Grant's passing was a loss to a much wider community. Apart from his distillery interests he was also an enthusiastic breeder and judge of Aberdeen-Angus Cattle, and his bulls were always in demand at the Aberdeen and Elgin Sales. For many years he took an active and practical interest in Agricultural Education, and at the time of his death was Vice-Chairman of the North of Scotland College of Agriculture. For fifty years, in his native county, he took a prominent part in Local Government affairs, and was for several years Vice-Convenor of Banffshire, an honour which he retained to the end.

The community in general, and the Board in particular, would be the poorer for his passing.

A Minute of regret and sympathy was submitted and adopted, the members present upstanding, and the Secretary was instructed to forward a copy to the widow and family of the deceased.

The late Professor James Hendrick.

The Chairman also referred, with deep regret, to the death of Professor James Hendrick, Aberdeen.

Professor Hendrick, he said, was admitted a member of the Society in 1900, and from 1905 to 1912 acted as Consulting Chemist. In 1914 he was made an Honorary Member in recognition of these services. Professor Hendrick was the first Professor of Agriculture in the University of Aberdeen, and occupied the Chair with distinction for a period of thirty years. A pioneer in Agricultural Education, he was recognised as one of Scotland's foremost Agricultural Chemists, and enjoyed a world reputation as a specialist in soil chemistry. He was a regular contributor to the 'Transactions,' and his contributions would be greatly missed in the Society's future publications.

A Minute of regret and sympathy was submitted and adopted, the members present upstanding, and the Secretary was instructed to forward a copy to the widow and family of the deceased.

Dundee Show, 1949.

Free Stands.—Further applications for free stands from Lady Haig's Poppy Factory, Edinburgh, and the Salvation Army, Lochee, Dundee, were considered and approved.

Implements.—A Minute of Meeting of Implements Committee, dated 2nd March, was submitted and approved.

The Minute recommended an increased supply of Implement Catalogues and improvements in the numbering of stands and directional signs within the Showyard.

It was recommended that there should be no obligation on the Society to have New Implements tested prior to exhibition at the Agricultural Machinery Testing Station at Howden, but that these facilities should be open to individual exhibitors.

New Implements.—The following were appointed Judges of New Implements: Mr W. D. Simpson, Highfield, North Berwick, and Mr T. A. Wedderspoon, Castleton, Eassie.

Special Prizes.—A number of Special Prizes were accepted and votes of thanks accorded to the donors.

Show of 1950.

Sites.—A report of Meeting of the Sites Committee, held on 2nd March, was submitted and approved.

The Report recommended that St James' Park, Paisley, be selected as the venue of the Show of 1950, subject to an assurance being given by Paisley Town Council that adequate space could be provided for car parking in accordance with the Society's requirements.

Finance.

A Minute of Meeting of Finance Committee, dated 2nd March, was submitted and approved. The Minute dealt, *inter alia*, with the following matters:—

Scottish Council (Development and Industry).—It was decided that the Society should not give financial support for the work of the Council's Agricultural Equipment Subcommittee.

National Diploma in Dairying.—It was agreed to recommend that the Society meet one-half of the estimated cost of £182, 6s. 8d. to provide additional desks and chairs in the Dairy School, Auchincruive, for the N.D.D. Examinations, the other half of the estimated expenditure being borne by the West of Scotland Agricultural College.

Dundee Show—Car Parking.—The Committee recommended the appointment of

National Car Parks, Ltd., to take complete charge of all car-parking arrangements at Dundee on the basis of a fee of 30 per cent of the gross takings.

Show Posters.—It was agreed to accept an offer by Messrs M'Lagan & Cumming, Edinburgh, for printing 8500 copies of a Show Poster, at a cost of £436.

It was remitted to the Chairman, the Treasurer, and the Honorary Secretary, along with Mr Ian C. Menzies, to approve the final draft of the proposed Poster.

Secretary's Retiring Allowance.—The Committee recommended that the Society should itself grant a Bond of Annuity to provide a Joint Annuity to Mr and Mrs Stirton of £600 per annum, payable monthly, commencing the first payment on 31st March 1949.

It was further recommended that Mr Stirton receive a further payment of £260 in respect of the period to 31st July 1949, when the first payment under his original Deferred Annuity Policy would be paid by the Scottish Widows' Fund.

Petrol for Agricultural Tractors.

A letter was submitted from Messrs Harry Ferguson, Ltd., requesting the support of the Society in their efforts to secure a remission of the present tax on petrol for agricultural tractors.

After discussion, it was agreed that the Society should support this proposal in principle, but that any representations should be communicated through official channels rather than through the medium of commercial firms.

MEETING OF DIRECTORS, 6th APRIL 1949.

Mr JAMES R. LUMSDEN, C.B.E., of Arden, Dunbartonshire, in the Chair.

Present.—*President*—The Earl of Elgin and Kincardine, K.T., C.M.G. *Vice-President*—The Earl of Mansfield. *Ordinary Directors*—Mr J. W. Alexander, M.V.O.; Mr John L. Arnott; Mr Thomas Black; Mr Peter W. Crawford; Mr Archibald J. Elder; Captain Thomas Elliot, O.B.E.; Mr Peter Gordon; Mr Adam Gray; Mr William Hogg; Mr R. Balfour Kerr; Mr William H. Lawson; Mr James R. Lumsden, C.B.E.; Mr James M'Laren; Mr Ralph S. MacWilliam; Mr J. C. Wallace Mann; Mr Ian C. Menzies, O.B.E.; Mr Thomas Graham Reid; Mr William J. Reid; Lieut.-Colonel Sir Guy Shaw-Stewart, Bt., M.C.; Mr John L. Sleigh; Brigadier J. E. Stirling; Captain R. J. Thomson; Mr Francis W. Walker; Major A. L. P. F. Wallace; Mr R. H. Watherston. *Extraordinary Directors*—Mr R. Scott Aiton, M.C.; Mr William Allison; Mr William Belfrage Black; Mr Thomas Clark; Captain James Craig; Mr James Durno, C.B.E.; Mr Harry H. Edie; Mr A. W. Howison; Mr William Montgomery; Mr John Niven; Sir J. Denby Roberts, Bt.; Captain Ian S. Robertson, M.C.; Mr Francis W. Roger; Mr William D. Simpson; Mr J. Norman H. Steele, B.Sc.; Mr Matthew Templeton; Mr James L. Whyte. *Treasurer*—Sir Joshua Ross-Taylor. *Honorary Secretary*—Major R. F. Brebner, C.B.E.

Dundee Show, 1949.

Programme of Events, &c.—It was remitted to the Secretary to arrange a detailed Programme of Events, including Military and Naval Displays and Bands, Sheep Dog Demonstrations, and a Motor Cycle Display.

Special Prizes.—A number of Special Prizes were accepted and votes of thanks accorded to the donors. These included the following:—

Mr George G. M'Diarmid, Barrhead—Perpetual Challenge Cup for Horse-Shoeing and Shoe-Making.

National Pig Breeders' Association—Perpetual Challenge Cup for best Wesssex Saddleback Pig.

Ayrshire Cattle Herd Book Society.—Correspondence was submitted from the Secretary of the Ayrshire Cattle Herd Book Society suggesting the setting up by that Society of a Panel of Inspectors to exercise control over Ayrshire animals entered for the Show.

After discussion, it was decided that the Society could not accede to this suggestion.

Car Park at Wormit.—The Secretary reported that arrangements had been made whereby a 12-acre grass park adjoining Wormit Station would be available for the convenience of motorists from Fife for car parking during the period of the Show. The Board approved of these arrangements, including payment of a rent of £35, plus the cost of necessary fencing of the park.

Paisley Show, 1950.

It was reported that Paisley Town Council had agreed to the various conditions laid down by the Society regarding the use of St James's Park, Paisley, for next year's Show, including the provision of adequate space for car parking. Thereafter, it was decided that the date of the Paisley Show in 1950 be fixed for the 20th-23rd June inclusive.

Show of 1953.

There was submitted a letter from the Town Clerk of Stirling, regretting that, in view of the estimated cost of levelling, &c., in accordance with the Society's requirements, the King's Park, Stirling, could not be made available for the Show of 1953.

There was also submitted a letter from the County Clerk of Clackmannan inviting the Society to consider Alloa Park policies as a venue for the 1953 Show. It was agreed to acknowledge, with thanks, receipt of this offer, consideration of which was deferred to a later date.

Education.

A Minute of Meeting of Education Committee, dated 6th April, was submitted and approved.

The Minute recommended the nomination of Mr R. M. Lemmon as one of the Society's representatives on the National Agricultural and Dairy Examination Boards in succession to Mr John Stirton.

Royal Visit.

The President announced that Her Majesty The Queen proposed to visit the Show at Dundee on Wednesday, 22nd June, provided there was no relapse in His Majesty's state of health during the intervening period. This intimation was received with acclamation by the members of the Board, and appreciation was expressed of the services in this connection of the President and Lord Airlie, Convener of the local Show Committee.

It was agreed that it be remitted to the following small Committee to make the necessary arrangements for the Royal visit: the President, the Chairman of the Board, the Convener of the local Show Committee, the Treasurer, the Honorary Secretary, and the Secretary.

Consulting Entomologist.

There was submitted a letter from Dr A. E. Cameron intimating the necessity for the severance of his official connection with the Society on account of pressure of other work. Dr Cameron's resignation was accepted with regret, and the question of the appointment of a successor was deferred for further consideration at a later date.

Finance.

The following Minute of Meeting of Finance Committee, dated 6th April, was submitted. The Minute dealt, *inter alia*, with the following matter:—

Special Grants.—It was recommended that the following Special Grants be renewed for the current year:—

Animal Diseases Research Association	£200
Glasgow Veterinary College	150
Edinburgh Highland Reel and Strathspey Society	75
Glasgow and West of Scotland S.P.C.A.	10

PROCEEDINGS AT GENERAL MEETINGS.

GENERAL MEETING, 2ND JUNE 1948.

Mr J. E. KERR, C.B.E., of Harviestoun, Dollar, in the Chair.

Election of Members.

The Secretary submitted a list of 1055 candidates for election to membership. These were balloted for and duly elected.

Election of Office-bearers.

Mr James R. Lumsden, C.B.E., of Arden, Chairman of Directors, moved that the following be elected Office-bearers of the Society for the year 1948-49 :—

President.—The Earl of Elgin and Kincardine, K.T., C.M.G., Broomhall, Dunfermline.

Vice-Presidents.—The Earl of Mansfield, Logie House, Methven; The Earl of Strathmore, Glamis Castle, Glamis; Lord Kinnaird, K.B.E., Rossie Priory, Inchture; Lord Provost Archibald Powrie, O.B.E., City Chambers, Dundee.

Ordinary Directors, 1945.—Mr Thomas A. Wedderspoon, Castleton, Eassie, Angus; Mr James Kilpatrick, Craigie Mains, Kilmarnock; Mr George Grant of Glenfarclas, Blacksboat; Captain R. J. Thomson, Kaimes, West Linton; Mr James M'Laren, Alton of Bandedath, Stirling; Mr Peter W. Crawford, Dryfeholm, Lockerbie; Mr Ian C. Menzies, O.B.E., Broomhills, Liberton, Edinburgh; Mr Ralph S. MacWilliam, The Croft, Nairn.

1946.—Mr Thomas Black, Balig, Doonfoot, Ayr; Mr William J. Reid, Fordhouse of Dun, Montrose; Mr William Hogg, Clackmao, Earlstoun; Mr James R. Lumsden, C.B.E., of Arden, Dumbartonshire; Mr J. W. Alexander, M.V.O., Langshaw, Moffat; Mr J. C. Wallace Mann, Carrington Barns, Gorebridge, Midlothian; Brigadier J. E. Stirling, Holme Ross, Croy, Gollanfield; Mr William H. Lawson, Frithfield, Anstruther.

1947.—Mr John L. Sleight, Newseat of Tolquhon, Tarves, Aberdeenshire; Captain Thomas Elliot, O.B.E., Thirlestane, Lauder; Mr Thomas Graham Reid, Netherton, Bridge of Allan; Mr Peter Gordon, Balcraig, Port William, Wigtownshire; Mr Robert Balfour Kerr, Barney Mains, Haddington; Mr George Clyne of Noss, Wick, Caithness; Mr Archibald J. Elder, Pitbauchlie, Dunfermline; Lieut.-Colonel Sir Guy Shaw-Stewart, Bt., M.C., Ardgowan, Inverkip, Renfrewshire.

1948.—Mr John L. Arnott, Haymount, Makerstoun, Kelso; Mr J. E. Kerr, C.B.E., of Harviestoun, Dollar; Mr Adam Gray, Ingleston, Borgue, Kirkcudbright; Mr R. H. Watherston, Crichton Mains, Ford, Midlothian; Mr Francis W. Walker of Leys, Leys Castle, Inverness; Mr Alexander D. C. Main, B.Sc., Windyedge, by Perth; Mr William Brown, Craigton, Bishopston, Renfrewshire; Major A. L. P. F. Wallace of Candacraig, Strathdon, Aberdeenshire.

Extraordinary Directors.—Mr R. Scott Aiton, M.C., Legerwood, Earlstoun; Mr William Allison, Almond Hill, Kirkliston; Captain James Craig, Gwydyr House, Comrie Road, Crieff; Mr James Durno, Uppernaill, Tarves, Aberdeenshire; Mr William Montgomery, Banks, Kirkcudbright; Captain Ian S. Robertson, M.C., Linkwood, Elgin; Mr William D. Simpson, Highfield, North Berwick; Mr J. Norman H. Steele, B.Sc.(Agric.), 61 Harrison Road, Edinburgh; Mr Matthew Templeton, Goshen Bank, Kelso; Mr James Wither, Awthirk, Stranraer.

Show Division Directors.—Mr William Belfrage Black, Holton House, Milnathort; Mr Thomas Clark, Muirtons, Perth; Mr Harry H. Edie, Corneeres, Anstruther; Mr John M. Fairlie, Kirkton, Monikie, by Dundee; Mr A. W. Howison, Rannagulzion, Blairgowrie; Mr John Niven, Gloagburn, Tibbermore, Perth; Mr John Provan, The Grange, Dunfermline; Sir J. Denby Roberts, Bt., Strathallan Castle, Auchterarder; Mr Francis W. Roger, Kenly Green, St Andrews; Mr James L. Whyte, Hayston, Forfar.

Treasurer.—Sir Joshua Ross-Taylor, Mungoswells, Duns.

Honorary Secretary.—Major R. F. Brebner, C.B.E., The Leuchold, Dalmeny House, Edinburgh.

The Office-bearers were unanimously elected.

Revision of Bye-Laws.

Mr James R. Lumsden, C.B.E., Chairman of Directors, moved the following Resolution amending the Bye-Laws of the Society as recommended by the Board of Directors at a meeting held on 5th May and confirmed at a meeting held that day :—

"That the Bye-Laws of the Society be altered as aforementioned, with effect in each case as from and after the 1st day of December 1948 :—

- (a) *Bye-Laws Numbers 1 and 2 to be annulled.*
- (b) *The following Bye-Law to be substituted for the existing Bye-Law No. 1 :—*

'1. The Ordinary Members of the Society, with the exceptions contained in the Bye-Law No. 2, and of holders of the Society's Agricultural Diploma and holders of the Society's First-Class Certificate in Forestry, shall pay at admission, and afterwards annually, in advance, the sum of £1, 10s., with the option and power of redeeming the same by payment of £18 as the purchase of a Life Subscription, and after eight annual payments of £1, 10s. have been made a Life Subscription may be purchased for £12, and after twelve such payments, for £9.'

- (c) *The following Bye-Law to be substituted for the existing Bye-Law No. 2 :—*

'2. Proprietors farming the whole of their own lands, whose rental on the Valuation Roll does not exceed £500 per annum, and all Tenant-Farmers, Secretaries or Treasurers of Local Agricultural Associations, Factors resident on Estates, Land Stewards, Foresters, Agricultural Implement Makers, Grain, Seed and Manure Merchants, Agricultural Auctioneers, Cattle Dealers and Veterinary Surgeons, none of them being also owners of land to an extent exceeding £500 per annum, and such other persons as, in respect of their official or other connection with Agriculture, the Board of Directors may consider eligible, shall pay at admission, and afterwards annually, in advance, the sum of £1, with the option and power of redeeming the same by payment of £12 as the purchase of a Life Subscription, and after eight annual payments of £1 have been made a Life Subscription may be purchased for £8, and after twelve such payments, for £6.'

Mr W. D. Simpson, Highfield, North Berwick, seconded, and the alterations in the Bye-Laws were unanimously approved.

Special Grants.

Mr George Grant of Glenfarclas, Blackboat, moved approval of the following Special Grants, which were recommended by the Board of Directors :—

- (1) £200 for the current year, to the Animal Diseases Research Association.
- (2) £150 for the current year, to the Glasgow Veterinary College.
- (3) £75 for the current year, to the Edinburgh Highland Reel and Strathspey Society.
- (4) £10 to the Glasgow and West of Scotland Society for the Prevention of Cruelty to Animals.

Mr J. W. Alexander, M.V.O., Langshaw, Moffat, seconded, and the Grants were approved.

Inverness Show, 1948.

Major R. F. Brebner, C.B.E., Honorary Secretary of the Society, reported that the arrangements for the Society's first Post-War Show, to be held at Inverness on 22nd-25th June, were well advanced. The good weather experienced during the months of March and April had enabled the work of erection to proceed satisfactorily and most of the Showyard buildings were practically complete.

As previously reported, the Town of Inverness had provided an excellent site at the Bught Park, which was beautifully situated between Tomnahurich and the River Ness and within a mile of the centre of the town. The Town Council had also granted a free and adequate supply of water, had made provision for a full gas service to the ground, and was arranging for ample transport between the centre of the town and the Showyard. In other ways the Council was cordially co-operating with the Society in its efforts to further the success of the Show.

The area covered by the Showyard proper was about 35 acres, while another 19 acres was conveniently available for the parking of cars and 21 acres for the parking of buses. The Main Entrance was from the road leading alongside the River Ness, while there was a subsidiary entrance at the opposite end of the ground and adjacent to the car park. Despite well-known difficulties in obtaining materials, every effort had been made to retain the familiar atmosphere of the Highland Showyard, and it was believed that this had been achieved. The compact nature of the Showyard would make the whole of the exhibits readily within reach of visitors without undue effort. The Parade Ring was more than usually attractive on account of the fine quality of the turf.

An excellent entry had been obtained in practically all sections of livestock. Cattle, horses, and sheep entries showed a substantial increase compared with those at the last Show at Inverness in 1932. The entries of implements, machinery, and trade exhibits were well in excess of anything ever seen at Inverness, and included examples of all the latest in agricultural implements and machinery.

There would be the usual parades of livestock. The Jumping Competitions, which would be conducted under the Rules of the British Show Jumping Association, with increased prize money, should be specially attractive. A Pageant of Agriculture, "The March of Time," had been arranged by the Turriff District Agricultural Association and the Turriff and District Junior Agricultural Club. The Pageant would depict the developments which have taken place in Scottish Agriculture from earliest times up to the present date. Other attractions would include performances by Charles Fricker's Police and war-trained Alsatian Dogs and a display of marvellous horsemanship by Buck Ryan.

While mention had been made of the foregoing special events, it was pointed out that the many other attractive features of the Show would continue as usual. Amongst these mention might be made of the Agricultural Education and Research exhibit which had been designed on new and comprehensive lines and would include growing exhibits of an instructional nature. There would also be the usual Livestock Judging Competitions, Rural Industries Section, Poultry and Beekeeping Sections, and a Flower Show.

Music would be provided by the Band of the 1st Battalion Queen's Own Cameron Highlanders and Pipers of the Highland Group Training Battalion.

Their Majesties The King and Queen and H.R.H. Princess Margaret would visit the Show on Thursday, the 24th June. Their Majesties were no strangers to the Show, having spent two days, when Duke and Duchess of York, at the Show in Dundee in 1933. The occasion, however, was unique in being the first on which the Reigning Sovereign had paid a visit to the Show of the National Agricultural Society of Scotland. Visits of inspection would be paid by Their Majesties to various exhibits in the Showyard. It was confidently expected that the people of Scotland would turn out in large numbers to offer Their Majesties and Princess Margaret a royal welcome.

Given favourable weather conditions during the Show week, it was felt that the Meeting at Inverness should be one of the most notable in the history of the Society.

Show of 1949.

Mr John Niven, Glogaburn, Tibbermore, Vice-Convenor of the Shows Committee, reported that arrangements were proceeding for the Show to be held at Dundee in 1949. The Corporation of Dundee had placed at the disposal of the Society a site at Riverside Park, where the Show had been held in 1933. The extent of ground available was considerably greater than it had been on the former occasion, and the surface had been improved. Besides the site, the Corporation was providing a supply of water free of charge, and was making arrangements for services of gas and electricity on the Showground. A Committee had recently visited Dundee and inspected the site and conferred with the Town Council and Corporation officials. Everyone had expressed readiness to co-operate in every way with the Society in furthering the success of the Show.

The President and Office-bearers for the year had just been elected, and the actual work of preparation for the Show would commence soon after the conclusion of the Show at Inverness.

Show of 1950.

Mr James R. Lumsden, C.B.E., Chairman of Directors, reported that at the Annual Meeting in January 1948 it was resolved that, provided a suitable site were available and satisfactory financial and other arrangements could be made, the Society's Show of 1950 be held in the Glasgow Show Division. No invitation to hold the Show had been received, but it was understood that the Corporation of Glasgow had the matter in hand.

Agricultural Education.

In the absence of Sir Joshua Ross-Taylor, Convenor of the Education Committee, Mr Ian C. Menzies, O.B.E., Broomhills, Liberton, reported that it had again been arranged

to hold two Examinations in 1948 for the National Diploma in Agriculture—one at Edinburgh during April and the other at Leeds in July.

At the Examination at Edinburgh, which had been held from 7th to 14th April, 138 candidates had presented themselves. The majority of the candidates had been from Scottish centres, along with others from Leeds University, the Harper Adams Agricultural College, the Midland Agricultural College, and other English centres. As a result of the Examination 43 Diplomas had been awarded.

Of the 138 candidates, 9 had appeared for all subjects and 4 of these had obtained the Diploma; 71 had passed certain subjects previously and were completing the Examination on that occasion, and of these 39 had been successful in obtaining the Diploma. The names of the successful candidates would appear in the 'Transactions.'

The remaining 57 had presented themselves for first groups of three, four or five subjects, and of these 33 had passed in the subjects for which they had appeared and were entitled to appear for the second group of subjects at a subsequent Examination.

The Examination at Leeds would commence on 13th July. The number of candidates who had applied for admission was 330.

Vote of Thanks.

On the motion of Mr J. C. Wallace Mann, Carrington Barns, Gorebridge, a cordial vote of thanks was accorded to the Chairman, Mr J. E. Kerr, C.B.E. In moving the motion Mr Wallace Mann said that they would like to thank Mr Kerr, not only for the way in which he had conducted the Meeting, but for the tremendous services he had given to that great and ancient Society. Mr Kerr had been a Director for not less than forty-six years, and he doubted if such a record had been equalled in the long history of the Society.

In reply Mr Kerr said that he had always found the Board a harmonious and friendly one and he had thoroughly enjoyed the work.

MEETING OF MEMBERS HELD IN THE SHOWYARD, INVERNESS, 23RD JUNE 1948.

Sir DONALD W. CAMERON of Lochiel, K.T., C.M.G., President of the Society,
in the Chair.

The Chairman, in opening the proceedings, said he felt very honoured that they should have elected him as their President in succession to the late Duke of Portland, who had been President of the Society when they had held their Show on the last occasion at Inverness in 1932. He was particularly proud because it was usually the custom for the Society to have as their President either a Prince of the blood Royal or a Peer of the Realm, and he was a mere Highland Chieftain.

That Show would, he said, in the ordinary course of events have been held in 1940, but for the war, and they would have been holding a Show at Inverness that year, in any case, having in 1948 completed the whole cycle of the Society's eight districts of Scotland. It was no fault of their Directors that they had not held a Show there before then. It was three years since the war had ended, and it had been hoped they would have been able to hold the Show in 1947 when the Royal Society of England had resumed their Show. Unfortunately they had received no support from the then Secretary of State for Scotland, who had refused to recommend the Board of Trade to give them the necessary timber. Happily, the present Secretary of State had given them every encouragement and help—(applause)—and he had been able to get the Department of Agriculture to grant the timber required. Their deepest thanks were due to the Secretary of State for all his help and assistance in the matter.

It was exactly sixteen years to the day since the late Duke of Portland had presided at the Show there, and this was the thirteenth Show that the Society had held in Inverness. The Society was founded in 1784, and was originally known as the Highland Society of Edinburgh. Its object then was to improve the condition of the Highlands and Islands. It was a lamentable fact that, though these objects were no longer undertaken by the Society, the inquiries about improving the condition of the inhabitants of the Highlands and Islands were still going on 164 years after the Society had been founded. These inquiries were being conducted by the Highland Panel set up about eighteen months ago. He did not mean to infer that nothing had been done for the Highlands and Islands during these 164 years. During that time the Caledonian Canal and the Crinan Canal were constructed; and railways were made from Perth to Inverness, Wick and Thurso, and to Oban, Fort William, and Mallaig. More recently trunk roads had been constructed from Perth to Inverness and Wick, and also from Glasgow to Inverness. The

Government were going on with the scheme to modernise roads, giving 100 per cent grants. So a great deal had been done for the Highlands, but a great deal more required to be done to maintain the population in the Highlands, and bring back those who had left for the South and overseas.

Gradually, the scope of the Society became more and more confined to agriculture and the ambit of the Society was enlarged to cover the whole of Scotland. In 1834 the original title of the Society was altered by Royal Charter to its present name—The Highland and Agricultural Society of Scotland. As they knew, they were the premier Agricultural Society of Scotland and their main object was to improve the quality of their livestock, although all activities for the betterment of agriculture in Scotland also received their attention. He noticed that the Duke of Portland had stated in his speech there in 1932 that the premiums offered at the first Highland Show in Inverness in 1831 had amounted to only £318. At the first Show the Society had ever held the premiums were only £75. That day the premiums amounted to £9439, and the membership stood at well over 10,000. The entries had also shown considerable increases in cattle, sheep, and horses. It was only in goats that he had not observed an increase, the number at that Show being exactly the same as in 1932. During the war years their membership naturally fell away, but it was increasing by leaps and bounds, and they were practically up to the same figure as before the war. He hoped the number would go on increasing year by year.

During the war, too, their activities had been very much confined. They had had to abandon the annual Show, and all local shows also had been cancelled. On the other hand, it was not to be supposed that they had done nothing. Grants to Horse Associations had been continued and indeed expanded, and the awards of medals for ploughing and hoeing competitions and for long service had not been interfered with. The Society's educational activities had continued, and grants to educational bodies and research stations had been maintained. Constant watch had been kept by their Directors during the war, on regulations and schemes of control issued by the Government, and appropriate representations had been made from time to time to the Government Departments concerned.

In April 1944 a demonstration of the latest farm implements adapted for spring work had been held at Castleton in the County of Angus on ground kindly placed at their disposal by Mr T. A. Wedderspoon. The Society had also devoted a considerable amount of time to the consideration of post-war agriculture, and its views had been embodied in a Memorandum which was issued in November 1943. But the main war-time activity of the Society, of which they had every reason to be proud, was the Scottish Red Cross Agriculture Fund. This had been organised in April 1940, and an initial grant of £1000 was voted by the Directors to the Fund. The organisation had given a tremendous amount of work to their already depleted staff, but they did it ungrudgingly, and the final amount received was over three-quarters of a million pounds—the greatest philanthropic effort of an agricultural nature ever undertaken in Scotland. And every penny subscribed to that Fund went to the Red Cross, all expenses having been defrayed by the Society.

Now that the war was over, their thoughts naturally turned more and more to agriculture. It had taken two wars to make the country realise how much they depended on agriculture and on producing their own food. One would have thought that the country would have had a lesson after the first World War. But, no. They went back to their old ways before 1914, with the resulting agricultural slump, which had taken place two or three years after the first war had ended. Now, he really thought the country had learned the lesson that they could not depend in future on their supplies of food coming in from abroad. They must rely on what they grew themselves, and he hoped that never again would the country allow those who lived by the land to go out of business and seek other means of livelihood. They now had minimum prices for their stock guaranteed for a certain number of years, and that should encourage them to put out capital and improve their land and their stock, and make it worth while for them to endeavour to make two blades of grass grow where only one grew before the war and two sheep live on a patch of ground where only one could live to-day. Unfortunately, during his life-time, on the many sheep farms he had in hand, it had, he was sorry to say, been the other way about. But they were hopeful that the two recent pieces of legislation which had been passed, or were in course of being passed, might do much to help the agricultural industry. He referred to the Agriculture (Scotland) Bill and the Hill Farming Act. After outlining the aims of the latter Act the President said there were limitations under the Act. One serious limitation was in regard to farm cottages, and he was afraid many proprietors would hesitate considerably before they put out money in improving farm cottages, because these cottages, when they were improved, were going to become untied cottages coming under the Rent Restriction Acts. Well, the cottage was part of the farm and must be occupied by a man working on the farm. No new developments had taken place to indicate that these cottages were in any way exempted. That was a very serious matter indeed, because, as a proprietor, one of the first things he wanted to do was to improve farm cottages, bringing them up to the standard of the cottages one saw in the towns. Every cottage should have a water-supply—hot and cold water laid on; it should have a bathroom and be provided with electricity where available. That was what one would like to see, but they were debarred from

getting any grant for such houses unless they were agreeable that the houses should come under the Rent Restriction Acts. That was a serious hardship to all farmers, and he spoke with considerable feeling on the subject. Subsidies now had been promised for sheep and cattle stock on hill farms until 1950, and each year's amount would be fixed according to circumstances.

The Agriculture Bill, continued the President, was a very long one and he expected they knew as much about it as he did. It certainly was designed to improve agricultural conditions in Scotland and, generally, he thought it had been accepted by all interests.

The object of their Society, he said, was to improve agriculture and especially to improve the livestock, but no farmer was going to put out capital unless he saw he would get some return for the money expended. A farmer must have security before he puts out the money required to improve stock or land. That was absolutely essential and this Society was doing a great deal towards improving their stock. He hoped members would take advantage of the Shows to see what sort of stock they should have and what mechanical implements they required for working their land.

In future, as he had said already, the country must depend more and more on agriculture and on production of livestock. Agriculture was the basic industry of the country and would always remain so. It had been the basic industry ever since the days of Adam and Eve. If they were going to continue to exist as a nation, they must get the very most they could out of the land.

During the past 100 years their population had been drifting, drifting, and drifting to the cities and industrial centres. They must get the population back on to the land; they must have a rural population and stop all this drift to the cities and industrial centres. It would be a good thing if they could bring to the land those people whose fathers and grandfathers formerly lived on the land. They could not have a prosperous country without a prosperous rural population. They knew that—

" Ill fares the land, to hastening ills a prey,
Where wealth accumulates and men decay ;
Princes and lords may flourish or may fade ;
A breath can make them, as a breath has made ;
But a bold peasantry, their country's pride,
When once destroyed, can never be supplied."

In conclusion, he thanked them for the honour they had done him in electing him President of the Society, and he hoped that the next Show at Inverness would be as successful and even more so than the present one.

Revision of Bye-Laws.

Mr James R. Lumsden, C.B.E., of Arden, Chairman of Directors, moved that the amendments to the Society's Bye-Laws, which were approved at the Half-Yearly General Meeting on 2nd June 1948 and which appear in full in the Minute of Proceedings at that meeting, be confirmed in terms of the Society's Charters. In moving the resolution Mr Lumsden said that the alterations were to give effect to the proposed increase in the rate of members' subscriptions. The proposal was that as from the first day of December 1948, which was the first day of the new financial year of the Society, what had been known as the higher subscription—in the past £1, 3s. 6d.—should be raised to £1, 10s., and the corresponding life membership subscription should be raised from twelve guineas to £18; and that the lower subscription—in the past 10s.—be raised to £1, while the corresponding life subscription should be increased from seven guineas to £12.

Mr Ian C. Menzies, O.B.E., Broomhills, Liberton, in seconding the motion, said it was essential that this old Society should keep up to date. The changed value of money made it necessary to increase the subscriptions.

The amendments to the Bye-Laws were unanimously confirmed.

Votes of Thanks.

Mr Lumsden then moved a cordial vote of thanks to the Provost, Magistrates, and Town Council of Inverness for the excellent site provided for the Show, and for the free water supply and other public services and their co-operation and assistance in all matters tending to promote the success of the Show.

So long ago as 1938, he said, the Society had received an invitation from the Provost and Council of Inverness to hold the Show in that beautiful city. They expected at that time that a Show would be held in 1940, but, alas, the war intervened, and, as the President had explained, they had not been able to hold a Show until this year. They had thought it would have been possible to hold the Show sooner but difficulties had come in the way, and so, ten years after the invitation was first extended to them, they had been able to visit that beautiful city, which they had done

with the very greatest pleasure. He was sure all members would agree with him that the Council had provided them with a most beautiful site in the Bught Park. (Applause.) He did not think there was a finer site in all Scotland. They could have done, perhaps, with a little greater extent, but the Show had been laid out, he thought, very tastefully, and the distances between one stand and another were not so great as in some other show-grounds, and therefore it was easier for visitors to see all that was to be seen in a short time. Accordingly, there were benefits from a somewhat restricted ground. As they knew, they moved from place to place, with their Shows having a circuit of eight years, in which time they visited the eight districts of Scotland, and while that was so, they were very dependent on the good graces of the Councils of the towns they visited.

He said he could not praise too highly the excellent assistance given by Provost Ross, the Council, and the Parks Superintendent and other officials. Without their able and willing assistance, the Society would not have been able to plan and have the show-yard ready in time. They had had a record gate for the first day, and while the Provost had not been able to control the Clerk of the Weather quite so well during the night as they would have wished, he felt sure ample preparation had been made for the Royal visit, and that the sun would shine and dry up the ground before the arrival of Their Majesties. They were all looking forward immensely to that visit, and appreciated highly the successful efforts of the President in arranging for Their Majesties and Princess Margaret to visit the Show.

Captain Ian S. Robertson, Linkwood, Elgin, Convener of the Shows Committee, in seconding the vote of thanks, said everyone had heard of Highland hospitality, and he was sure the people from the South had been very well received in Inverness. He was sure, too, that visitors appreciated the courtesy and friendliness with which they were received. Captain Robertson added that he knew the Town Council of Inverness wished to see the Show brought back again, and he believed the Society, with the records they were then breaking, wanted to return to Inverness.

The vote of thanks was heartily accorded.

Provost Hugh Ross, in reply, said it was with great pleasure that, on behalf of the Magistrates, Town Council, and citizens of Inverness, he welcomed the Society to the Highland Capital on that occasion. He thanked Mr Lumsden for the kindly way in which he had proposed the motion and the kindly references to the town officials who took such an active part in the preparation of the ground. It was a proud moment, he said, for them to have the Show in Inverness, and he could assure the members that the arrangements for their reception had been long and carefully planned, and they were glad to know that the facilities they had been able to provide had met with approval. In Inverness they had been aware of the long and strenuous efforts made to secure the timber for the Show, but at last with relief they had seen that agricultural township grow and take shape on a worthy place for worthy exhibits, representing the country's livestock, the best agricultural machinery, and the demonstrations on all sides of the modern methods of agriculture. The prestige of Scottish agriculture had been much enhanced by former Highland Shows, and he believed it would be raised still further by this first post-war Highland, and that their visitors from overseas would return to their respective countries impressed by what they had seen. Inverness was proud to have received the Society, and if the Society had been pleased by their reception, they in Inverness were fully repaid. He again thanked them for the honour done to the Highland Capital by choosing it as the venue of that great agricultural event. (Applause.)

Sir Joshua Ross-Taylor, Mungoswells, Duns, Treasurer of the Society, proposed a vote of thanks to the Lord Lovat, Convener, and members of the Local Committee for the efficient and successful manner in which they had carried out the arrangements for the Show. The Directors, he said, were extremely indebted to the Local Committee which had to be appointed wherever a Show was to be held. The first reason for that was that it removed some of the heat and burden from the shoulders of the Directors. The other reason—and it was an essential one—was that it created local interest. They had been particularly fortunate that year in having an active, strong, and keen Local Committee. He knew that the Directors and the members should be very grateful to them. Another most fortunate point was that they had not only a Highland Chieftain as President but also a member of the Peerage as Convener of the Local Committee. He referred to Lord Lovat, whom they all knew took such a great interest in agriculture and all rural matters. Had it not been for Lord Lovat, he did not think the Show could have been the success it was. They all cordially thanked Lord Lovat, the Convener, and the members of the Committee for the efficient and successful manner in which they had carried out the arrangements for the Show.

Major R. F. Brebner, C.B.E., The Leuchold, Dalmeny House, Honorary Secretary of the Society, in seconding the motion, said that they, perhaps, thought that when Lord Lovat was appointed Chairman of the Local Committee he might adopt some commando methods in dealing with the Show, but he did not think that had been necessary. (Laughter.) The Committee had worked most harmoniously under his Lordship.

The motion was unanimously passed.

Lord Lovat, in reply, said the Local Committee had worked as amateurs, with the enthusiasm which came with first attempts, but he would not say they did anything

notable. They certainly could not have functioned at all without the stiffening of the Directors who met and made decisions, often at considerable inconvenience to themselves, down in Edinburgh. Mr Sturton and the permanent staff deserved the very highest praise. The Committee had done all they could, he said, and he could assure the members they had put their backs into this important work and had done great things. In fact, they had moved mountains, but without the Directors and particularly the President they would not have been there that day with everything complete and ready for the Royal visit the following day. He thought the most satisfactory reward for their part in the work was the knowledge that on the previous day some 8000 people had passed through the turnstiles, while in 1932 there were only 1272 on the first day. It had been a great pleasure to work for the Highland Society.

The Earl of Mansfield said that while he agreed that the arrangements were admirable, there was one defect—that was the inadequacy of the labelling of the implement stands. He suggested that in future cards some four or five inches square, with bold figures, be provided. His Lordship also wished the Directors would make it possible for exhibitors to get catalogues of the Show sent to them in advance, and he expressed the hope that the day would never come when the Society would get an established permanent show-ground in the centre of Scotland. He thought it would be a disaster if Inverness and the Highlands and Galloway in the South were not to get the advantage once in eight years of seeing a first-class Show. He hoped no consideration would be given to such an idea.

Mr Lumsden said that, in regard to the matter of the cards, larger numbers would be provided for the implement stands in future. The Directors were aware that the numbers had not been adequate on that occasion. As to the eight years' circuit, it was well known that suggestions had been made by certain persons that it might be absolutely necessary at some future date to have a permanent showground, but the matter had not been considered seriously by the Directors meantime. With regard to the suggestion about catalogues, he did not know whether that was possible or not, but he rather doubted it. The matter would be considered, however.

Vote of Thanks to President.

In proposing a vote of thanks to the President, Major John Stirling of Fairburn said no one was better qualified to preside at the Inverness Show than a Highland Chieftain and no one could have presided more efficiently or with greater courtesy than Sir Donald W. Cameron of Lochiel.

The President, in reply, expressed the thanks of the Society to Lord Lovat for his assistance in connection with the Royal visit and for acting as host to Their Majesties.

ANNIVERSARY GENERAL MEETING, 5TH JANUARY 1949.

The EARL OF ELGIN AND KINCARDINE, K.T., C.M.G., President, in the Chair.

Congratulations to Mr James Durno, C.B.E.

Before proceeding with the business of the Meeting the Chairman conveyed the congratulations of the Society to Mr James Durno, Uppermill, Tarves, on the honour of Commander of the Order of the British Empire (C.B.E.) which had been conferred on him by His Majesty the King.

Mr Durno expressed his thanks to the Meeting.

Election of Members.

The Secretary submitted a list of 283 candidates for election. These were balloted for and duly elected.

Membership.

Mr James R. Lumsden, C.B.E., of Arden, Alexandria, Chairman of Directors, reported that the membership of the Society at the beginning of 1948 was 7643. During the year there were lost, through death, resignations and other causes, 251 members. New members elected during the year numbered 2208 (1146 in January and 1062 in June), thus making the total membership at 31st December 1948, 9600.

Of this number 7250 were Life Members and 2350 paid subscriptions annually—234 on the higher rate and 2116 on the lower. 17 members of the Society, so far as was known, were still on service with H.M. Forces, and these, in accordance with the resolution of the Directors, would continue to receive the privileges of membership without payment of subscriptions.

Accounts for 1947-48 and Special Grants.

Sir Joshua Ross-Taylor, Mungoswalls, Duns, Treasurer of the Society, submitted the Accounts of the Society for the year ended 30th November 1948.

The value of the General Funds at the close of the Accounts, he said, amounted to £209,576, being an increase of about £9489 as compared with the value shown in the previous year's accounts.

Receipts from members' life subscriptions during the year had reached the high total of £10,776, 3s. compared with £940 for the previous year. Annual subscriptions amounted to £1330, 12s., an increase of £418.

As from 1st December 1948 the annual subscription for members on the higher rate had been increased from £1, 3s. 6d. to £1, 10s., the life subscription being raised from £12, 12s. to £18. For members on the lower rate, the annual subscription was now £1 instead of 10s., and the life subscription had been increased from £7, 7s. to £12. The necessary alterations in the Bye-Laws to give effect to these changes had been approved at the Half-Yearly General Meeting of the Society held on 2nd June, and confirmed at a Meeting held in the Showyard at Inverness on 23rd June. It had been decided, however, that members elected prior to 1st December 1948 would have the option, up till 30th November 1949, of redeeming their annual subscription by payment of a Life Composition at the rates in operation before the change in the Bye-Laws became effective. After 30th November 1949, Life Compositions would be based on the new rates.

During the year the Society had spent on education (including medals to veterinary students) £199; on grants to Local Societies and on the cost of Long-Service Certificates, £993; on the 'Transactions,' £1583. In addition, £612 had been allocated in special grants, including £200 to the Animal Diseases Research Association; £150 to the Glasgow Veterinary College; and £100 to the Scottish Agricultural Organisation Society.

The Accounts of the Inverness Show brought out a probable surplus of £10,225, the largest surplus on any Show of the Society. A considerable sum had been expended during the year on the purchase of timber. A proportion of this sum had been charged to Inverness Show and the balance would be charged to future Shows. After meeting the whole cost of the timber the accounts for the year showed a small deficit of £756. This balance did not take into account the receipts from life subscriptions, amounting to £10,776, which were really capital receipts.

The financial position, continued the Treasurer, was most satisfactory. It had been a very successful Show at Inverness and the surplus had more than doubled the previous record. He did not know whether in another year they would be able to break that record again, but they would have a good try. He thought that not only the Inverness people but the people of the surrounding area were due a vote of thanks for the work they had so enthusiastically put in. It had been capped by Their Majesties giving up some engagements to come north and make the Show a great success.

Sir Joshua Ross-Taylor then moved approval of the Accounts and of the following special grants which had been recommended by the Board of Directors:—

- (1) £100 to the Scottish Agricultural Organisation Society, Ltd.
- (2) £10 to the Scottish Society for the Prevention of Cruelty to Animals.

Mr William D. Simpson, Highfield, North Berwick, seconded, and the Accounts were adopted and the special grants unanimously approved.

Argyll Naval Fund.

Mr James R. Lumsden, C.B.E., of Arden, submitted a report on the Argyll Naval Fund for the year ended 30th November 1948.

The income of the Fund for the year amounted to £369, 3s. 1d., while the expenditure comprised grants of £60 to two Naval Cadets—a total of £120. One beneficiary had received the allowance for the maximum number of years permitted by the regulations of the Fund, and his allowance had, therefore, ceased. One beneficiary remained on the list at the end of the year. The income of the Fund was sufficient to provide five or six allowances, and if any member knew of suitable candidates, full particulars could be obtained from the Secretary. The applicants should come from the Highlands, but the "Highlands" was used in quite a loose sense and applicants had been accepted who had only a slender connection with the Highlands as long as they had a good Scottish ancestry.

Appointment of Secretary.

Mr James R. Lumsden also reported that in September Mr John Stirton, Secretary of the Society, had intimated his wish to resign that office.

The post had been advertised and a large number of applications had been received. A short list of four had been selected by the Finance Committee, and these had been interviewed by the full Board. Following the interviews the Directors had unanimously decided to appoint Mr R. M. Lemmon, B.L., Solicitor, Aberdeen, to the post, at a commencing salary of £1200.

Mr Lemmon hoped to enter upon his duties early in February.

Mr Lumsden said that he hoped to have something to say about Mr Stirton's services to the Society on a future occasion, but meantime they would like to convey to Mr Stirton their heartiest congratulations on attaining his golden wedding.

Inverness Show, 1948.

Captain Ian M. Robertson, M.C., Linkwood, Elgin, reported that, after a lapse of eight years, the Society's Show had been held at Inverness on Tuesday, 22nd June 1948, and three following days. This was the 109th Show of the series, and the 13th General Show to be held at Inverness.

The Show, he said, would remain an outstanding event in the history of the Society by reason of the visit of Their Majesties The King and Queen and H.R.H. Princess Margaret. It had been the first occasion on which a reigning Sovereign had visited a Highland Show, and His Majesty had marked the occasion by conferring on the Society the privilege of using the title "Royal," the Society to be known in future as "The Royal Highland and Agricultural Society of Scotland." This honour was highly appreciated by the Directors and members as indicating the great interest taken by His Majesty in the work of the Society and in the industry which it represented.

The site provided by the Town Council of Inverness at the Bught Park was an excellent one, which had permitted of a compact and convenient layout of the Showyard buildings. As a setting for the Show no site could have been more picturesque. In addition to the site the Town Council of Inverness had granted a free supply of water and free Police supervision within the Showyard. The town officials had co-operated enthusiastically with the Society's staff in furthering the success of the Show.

The weather, unfortunately, had been unsettled, both prior to and during the Show, although it was only on the afternoon of the first day and the night following that heavy rain had been experienced. This had caused considerable cutting up of the Showground on the Wednesday, but, fortunately, conditions had much improved by Thursday, the day of the Royal visit.

The attendance figures on each day had been remarkable, and had reflected the keen interest taken by the people of Scotland in the resumption of the Show and the presence of Their Majesties in the Capital of the Highlands. The total attendance figures for the four days were 87,076, compared with 38,619 at the previous Inverness Show in 1932.

There had been a good display of Livestock, the entries in the Sheep section being the most notable. Implements and Machinery had been shown on an impressive scale, and had made an excellent display, which provided much interest and instruction.

A fuller report on the Show would appear in the 1949 volume of 'Transactions.' The Accounts of the Show had just been published, and these indicated a credit balance of £10,225. Inverness, at which previous Shows almost invariably showed a loss, had, on that occasion, established a record profit.

Dundee Show, 1949.

Mr T. A. Wedderspoon, Castleton, Eassie, Convener of the Shows Committee, reported that arrangements were proceeding for the Society's 110th Show to be held at Dundee from the 21st to the 24th June 1949. As previously reported, the Corporation of Dundee had placed at the disposal of the Society a site at Riverside Park, where the Show had been held in 1933. About 50 acres would be available as Showground, and 35 acres for car parks. Besides the site, the Corporation was granting a free supply of water for the Show, and had also decided to provide the necessary police supervision within the Showyard free of charge.

The Prize List, which was in course of preparation and would be issued in February, was on an unusually liberal scale. It had been decided to increase the prizes offered in all sections by approximately 30 per cent, so that the total offered in prizes from the Society's own funds should exceed £5000. This compared with a sum of £3900 offered in 1933. In addition, there were the usual large number of valuable Challenge Cups, Medals and Special Prizes, besides prize money provided by Breed Societies and private donors.

A number of extra sections had been added, amongst which might be mentioned

classes for Hereford Cattle, Percheron and Suffolk Horses, Wessex Saddleback Pigs, and Rabbits. Horse-shoeing and Shoe-making Competitions would be resumed.

A Committee had recently visited Dundee and inspected the site and conferred with members of the Corporation and town officials. Everyone expressed readiness to co-operate in every way with the Society in furthering the success of the Show.

Show of 1950.

Mr James R. Lumsden, C.B.E., Chairman of Directors, reported that it had been decided a year ago that, provided a suitable site were available and satisfactory financial and other arrangements could be made, the Society's Show of 1950 should be held in the Glasgow Show Division. Invitations to hold the Show, and offers of a site, had been received from the Corporation of Glasgow and the Town Councils of Paisley and Ayr, and a Committee had been appointed to visit and inspect the prospective sites. This Committee had not yet completed its inspection, but hoped to do so at an early date, when a report would be submitted.

Show of 1951.

Mr James Durno, Uppermill, Tarves, Aberdeenshire, moved the following resolution, which had that day been adopted by the Board of Directors: "That, provided a suitable site is available, and satisfactory financial and other arrangements can be made, the Society's Show of 1951 be held in the Aberdeen Show Division."

In moving the resolution, Mr Durno said that he had spoken to Lord Provost Duncan Fraser and the Town Clerk of Aberdeen on the matter, and they had assured the Society a warm welcome on behalf of the citizens.

Mr Ian C. Menzies, O.B.E., Broomhills, Liberton, seconded and the motion was unanimously adopted.

Education.

National Diploma in Agriculture.

Sir Joshua Ross-Taylor, Convener of the Education Committee, submitted a report on the Examinations for the National Diploma in Agriculture held in 1948.

Two Examinations had again been held—one at Edinburgh and one at Leeds. A full report on the Fifty-fourth Examination, held at Edinburgh in April, had been given at meetings held on 2nd June last.

At the Fifty-fifth Examination, held at Leeds from 13th to 23rd July, 321 candidates had appeared. As a result of the Examination ninety-seven Diplomas had been awarded. None had attained the Honours standard. Of the 321 candidates, 14 had appeared for all subjects, and, of these, 4 obtained the Diploma. 154 had passed certain subjects previously and were then completing the Examination, and, of these, 93 had been successful in obtaining the Diploma. The names of the successful candidates would appear in the next volume of the 'Transactions.'

The remaining 153 had presented themselves for first groups of three, four, or five subjects, and, of these, 84 had passed in the subjects for which they had appeared and were entitled to appear for the second group of subjects at a subsequent Examination.

National Dairy Diplomas.

Sir Joshua Ross-Taylor also submitted reports on the Examinations for the National Diplomas in Dairying, Dairy Husbandry, and Dairy Technology, held in September 1948.

National Diploma in Dairying.—The Fifty-third Annual Examination for the National Diploma in Dairying had taken place during September at the Dairy School for Scotland, Auchincruive, Ayr, for Scottish students, and at the University of Reading for English and Welsh students.

At the Auchincruive Centre, 98 candidates had presented themselves—77 had appeared for all subjects, and 21 for re-examination in certain subjects in which they had previously failed. 47 candidates had obtained the Diploma.

At the Reading Centre, 67 candidates had presented themselves—44 taking the whole Examination, 1 for Part II., and 22 for re-examination in certain subjects in which they had failed previously. 38 candidates had obtained the Diploma at that Centre.

The names of the successful candidates would appear in the next volume of the 'Transactions.'

Of those candidates who had failed, 26 at Auchincruive and 26 at Reading had failed in not more than three subjects, and these would be permitted, after further study, to appear at the next Examination for the subjects in which they had failed.

National Diploma in Dairy Husbandry.—The first Annual Examination for the new National Diploma in Dairy Husbandry had taken place in September at the Dairy School

for Scotland, Auchincruive, Ayr, or Scottish students, and at the University and British Dairy Institute, Reading, for English and Welsh students.

At the Auchincruive Centre, 3 candidates had presented themselves. 2 candidates had been successful in obtaining the Diploma. At the Reading Centre, 35 candidates had presented themselves. 21 candidates had been successful in obtaining the Diploma. Two Honours Awards had been made. Of those candidates who failed, 1 at Auchincruive and 9 at Reading had failed in not more than three subjects, and these would be permitted to reappear at the next Examination for the subjects in which they had failed.

National Diploma in Dairy Technology.—The first Annual Examination for the new National Diploma in Dairy Technology had taken place in September at the University and British Dairy Institute, Reading.

There had been no candidates at the Scottish Centre. 2 candidates had presented themselves at the Reading Centre. Of these, 1 had been successful in obtaining the Diploma. The other candidate, having failed in two subjects, would be permitted to reappear at the next Examination for the subjects in which he had failed.

Grants to Local Societies.

Mr T. A. Wedderspoon, Convener of the Shows Committee, reported that during 1948 a sum of £308 had been awarded in premiums and medals for competition at Local Agricultural Shows. £180 had been awarded in respect of Horse-breeding Grants. In addition, special grants for Allotments and other competitions, and grants to Women's Rural Institutes, had amounted to £131. 102 Medals for Ploughing and 33 Medals for Hoeing had been awarded during the year, at a cost of £144, 13s. 6d. 17 Silver Gilt and 74 Silver Medals had been given for Long Service, which, in addition to Long Service Certificates, had cost £261, 9s. 3d. The total of these grants for the year had amounted to £1025, 2s. 9d.

The Directors had decided that the annual grants to Local Agricultural Societies for Show Premiums be increased from £12 to £15, and that grants to Horse Associations for Horse-breeding be increased from £15 to £20. The following awards would be offered in 1949: Nineteen Societies to receive grants of £15 each, and twenty-three Societies (in intermediate year) grants of three Silver Medals each for Show Premiums; nine Horse Associations to receive grants of £20 each in respect of Stallions engaged; four Societies in Orkney and Shetland, grants of £3 each for Show Premiums; grants of £10 each to six Federations of Scottish Women's Rural Institutes for Exhibition Prizes; £15 and fifteen Silver Medals to the Scottish Allotments and Gardens Society for best allotments; Long Service Certificates and Medals, say, £320; and the usual medals for Ploughing and Hoeing Competitions, say, £155. The total estimated expenditure in 1949 under this head was £1169.

Vote of Thanks.

On the motion of Mr J. C. Wallace Mann, Carrington Barns, Gorebridge, a cordial vote of thanks was accorded to The Earl of Elgin and Kincardine, K.T., C.M.G., for presiding.

APPENDICES

APPENDIX I.

PREMIUM BOOK

OF

THE ROYAL HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND

1949

CONTENTS.

	PAGE
GENERAL NOTICE	3
CONSTITUTION AND MANAGEMENT	3
STATEMENT OF PRIVILEGES OF MEMBERS	4
TERMS OF MEMBERSHIP, &C.	5
OFFICERS AND DIRECTORS FOR 1948-1949	6
COMMITTEES FOR 1948-1949	9
REPRESENTATIVES ON OTHER BODIES	13
MEETINGS	15
GENERAL SHOW	15
DATES OF EXAMINATIONS	16
NATIONAL DIPLOMA IN AGRICULTURE (N.D.A.), 1949	17
WINNERS OF DIPLOMA IN 1948	26
NATIONAL DIPLOMA IN DAIRYING (N.D.D.), 1949	29
WINNERS OF DIPLOMA IN 1948	37
NATIONAL DIPLOMA IN DAIRY HUSBANDRY (N.D.D.H.), 1949	43
WINNERS OF DIPLOMA IN 1948	46
NATIONAL DIPLOMA IN DAIRY TECHNOLOGY (N.D.D.T.), 1949	48
WINNERS OF DIPLOMA IN 1948	54
CERTIFICATES IN FORESTRY	55
VETERINARY CERTIFICATES AND MEDALS	55
PRICES OF FERTILISERS AND FEEDING-STUFFS SEASON 1949 (as at 2nd February)	56
TABLE OF COMPENSATION VALUES FOR 1949	59
ENTOMOLOGICAL DEPARTMENT	62
BOTANICAL DEPARTMENT	63

PREMIUMS OFFERED.

GROUP I. --REPORTS.

GENERAL REGULATIONS	65
-------------------------------	----

1. THE SCIENCE AND PRACTICE OF AGRICULTURE FOR APPROVED REPORTS ON --

1. Rural Economy abroad, susceptible of being intro- duced into Scotland	66
2. Other suitable subjects	66

PREMIUMS OFFERED (*continued*)—

2. ESTATE IMPROVEMENTS—FOR APPROVED REPORTS ON—
 1. General Improvement of Estates by Proprietors . . . 66
 - 2, 3, 4, 5, and 6. Reclamation of Waste Land and Improvement of Natural Pasture by Proprietors or Tenants . . . 66
3. HIGHLAND INDUSTRIES—FOR APPROVED REPORTS ON—
 1. Best mode of treating Native Wool, &c. . . . 67
4. MACHINERY—FOR APPROVED REPORTS 68
5. FORESTRY—FOR APPROVED REPORTS ON—
 1. Planting on deep Peat-bog 68

GROUP II.—DISTRICT GRANTS.

- APPLICATIONS FOR GRANTS 69
- CLASS
1. LOCAL AGRICULTURAL SOCIETIES—Grants of £15 for Show Premiums for Horses, Cattle, Sheep, and Pigs . . . 69
 2. HORSE ASSOCIATIONS—Grants of £20 in respect of Stallions engaged for Agricultural purposes . . . 76
 3. LOCAL AGRICULTURAL SOCIETIES—Grants of Silver Medals in aid of Premiums 78
 4. SPECIAL GRANTS 80
 5. FEDERATIONS OF SCOTTISH WOMEN'S RURAL INSTITUTES—Grants of £10 for Show or Exhibition Prizes . . . 81

GROUP III.—COTTAGES AND GARDENS, &c.

- CLASS
6. LOCAL SOCIETIES, &c.—Grants of £3 for Premiums for Best-kept Cottages and Gardens 84
 7. LOCAL SOCIETIES, &c.—Grants of Minor Silver Medals for Best-kept Cottages and Gardens, Garden Produce, Poultry, and Honey 85

GROUP IV.—PLOUGHING, HOEING, AND LONG FARM SERVICE.

1. MEDALS FOR PLOUGHING COMPETITIONS 87
2. MEDALS FOR HOEING COMPETITIONS 89
3. CERTIFICATES AND MEDALS FOR LONG FARM SERVICE . 89
- AWARDS IN 1948 90

Address for communications :

R. M. LEMMON, B.L., Secretary,
 The Royal Highland and Agricultural Society of Scotland,
 8 Eglinton Crescent,
 Edinburgh 12.

Telephone : 23047-8.

Telegraphic Address : "Society, Edinburgh."

GENERAL NOTICE.

THE HIGHLAND SOCIETY was instituted in the year 1784, and incorporated by Royal Charter in 1787. Its operation was at first limited to matters connected with the improvement of the Highlands of Scotland; but the supervision of certain departments, proper to that part of the country, having been subsequently committed to special Boards of Management, several of the earlier objects contemplated by the Society were abandoned, while the progress of agriculture led to the adoption of others of a more general character. The exertions of the Society were thus early extended to the whole of Scotland, and have since been continuously directed to the promotion of the science and practice of agriculture in all its branches.

In accordance with this more enlarged sphere of action, the original title of the Society was altered, under a Royal Charter, in 1834, to **THE HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND**.

The Society avoids questions of political controversy, but in other public matters of practical concern to agriculture it seeks to guard and promote, by every means in its power, the welfare of all interested in the agriculture of Scotland.

Among the more important measures which have been effected by the Society are—

1. Agricultural Meetings and General Shows of Stock, Implements, &c., held in the principal towns of Scotland, at which exhibitors from all parts of Great Britain, Northern Ireland, and Eire (Irish Free State) are allowed to compete.

2. A system of District Shows instituted for the purpose of improving the breeds of Stock most suitable for different parts of the country, and of aiding and directing the efforts of Local Agricultural Societies and Associations.

3. A scheme of Awards to Farm Workers for long and approved service in Scotland.

4. The encouragement of Agricultural Education, under powers conferred by a supplementary Royal Charter, granted in 1856, and authorising the Society to grant Diplomas to Students of Agriculture; and by giving grants in aid of education in Agriculture and allied sciences. In 1800 the Society discontinued its own Examination, and instituted jointly with the Royal Agricultural Society of England an Examination for a National Diploma in Agriculture.

5. The institution of Examinations for a National Diploma in Dairying, a National Diploma in Dairy Husbandry, and a National Diploma in Dairy Technology, jointly with the Royal Agricultural Society of England and the British Dairy Farmers' Association.

6. The institution of an Examination in Forestry for First and Second Class Certificates. Terminated in 1935 in accordance with arrangements made with the Royal Scottish Forestry Society.

7. The advancement of the Veterinary Art, by conferring Certificates on Students who have passed through a prescribed curriculum, and who are found, by public examination, qualified to practise. Terminated in 1881 in accordance with arrangements made with the Royal College of Veterinary Surgeons.

8. The establishment of a Botanical Department.

9. The appointment of an Entomologist to advise members regarding insect pests, &c.

10. The annual publication of the 'Transactions,' comprehending papers by selected writers, Prize Reports, and reports of experiments, also an abstract of the business at Board and General Meetings, and other communications.

11. The management of a fund left by John, 5th Duke of Argyll (the original President of the Society), to assist young natives of the Highlands who enter His Majesty's Navy.

CONSTITUTION AND MANAGEMENT.

The general business of **THE ROYAL HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND** is conducted under the sanction and control of the Royal Charters, referred to above, which authorise the enactment of Bye-Laws.

The Office-Bearers consist of a President, Four Vice-Presidents, Thirty-two Ordinary and Twenty Extraordinary Directors, a Treasurer, an Honorary and an Acting Secretary, an Auditor, and other Officers.

The Supplementary Charter of 1856 provides for the appointment of a Council on Education, consisting of Sixteen Members—Nine nominated by the Charter and Seven elected by the Society.

STATEMENT OF PRIVILEGES OF MEMBERS.

MEMBERS OF THE SOCIETY ARE ENTITLED—

1. *To receive a free copy of the 'Transactions' annually.*
2. *To apply for District Premiums that may be offered, and for Long Service Awards for Agricultural Employees.*
3. *To report Ploughing Matches for Medals that may be offered.*
4. *To Free Admission to the Shows of the Society.*
5. *To exhibit Live Stock and Implements at reduced rates.*

Firms are not admitted as Members; but if one partner of a firm becomes a Member the firm is allowed to exhibit at Members' rates.

6. *To obtain Reports on the Animal Enemies of Crop Plants and Live Stock (including Poultry).*
7. *To attend and vote at General Meetings of the Society.*
8. *To vote for the Election of Directors.*
 &c., &c.

REPORTS ON THE ANIMAL ENEMIES OF CROP PLANTS AND LIVE STOCK (INCLUDING POULTRY).

The Consulting Zoologist is prepared to send to any Member of the Society a Report on damage to, or diseases of, plants and animals due to animal agency (Insects, Mites, Worms, Snails, Slugs, Birds, and the Smaller Mammals).

For further particulars, see under Entomological Department.

Consulting Zoologist.—Vacant.

TERMS OF MEMBERSHIP, &c.

The influence and usefulness of the Society depend mainly upon its strength in membership. The Members, through the Directors whom they elect, have the practical control of the affairs of the Society. The stronger the body of Members, the greater will be the usefulness of the Society. It will therefore be to both their own and the public advantage if all who are interested in Agriculture, and who are not already enrolled, should at once become Members of the Society.

ELECTION OF MEMBERS.

Candidates for admission to the Society must be proposed by a Member, and are elected at the half-yearly General Meetings in January and June. It is not necessary that the proposer should attend the Meeting.

CONDITIONS OF MEMBERSHIP.

HIGHER SUBSCRIPTION.

The ordinary annual subscription is £1, 10s., and the ordinary subscription for life-membership is £18; or after eight annual payments have been made, £12, and after twelve such payments, £9.

LOWER SUBSCRIPTION.

Proprietors farming the whole of their own lands, whose rental on the Valuation Roll does not exceed £500 per annum, and all Tenant-Farmers, Secretaries or Treasurers of Local Agricultural Associations, Factors resident on Estates, Land-Stewards, Foresters, Agricultural Implement Makers, Grain, Seed and Manure Merchants, Agricultural Auctioneers, Cattle Dealers and Veterinary Surgeons, none of them being also owners of land to an extent exceeding £500 per annum, and such other persons as, in respect of their official or other connection with Agriculture, the Board of Directors may consider eligible, are admitted on a subscription of £1 annually, which may be redeemed by one payment of £12, and after eight annual payments of £1 have been made, a Life Subscription may be purchased for £8, and after twelve such payments, for £6.*

According to the Charter, a Member who has not objected to his election, on the same being intimated to him by the Secretary, cannot retire until he has paid, in annual subscriptions or otherwise, an amount equivalent to a life composition.

* It must be stated, on behalf of Candidates claiming to be admitted at the Lower Rate, £1, under which of the above designations they are entitled to be admitted at that rate.

Patron of the Society.—HIS MAJESTY THE KING.

OFFICERS AND DIRECTORS FOR 1948-1949

President.

The EARL OF ELGIN AND KINCARDINE, K.T., C.M.G., Broomhall,
Dunfermline.

Vice-Presidents.

The EARL OF MANSFIELD, Logie House, Methven.
The EARL OF STRATHMORE, Glamis Castle, Glamis.
LORD KINNAIRD, K.B.E., Rossie Priory, Inchture.
RICHARD FENTON, Lord Provost of Dundee.

Year of
Election.

Ordinary Directors.

	THOMAS A. WEDDERSPOON, Castleton, Eassie, Angus.
	JAMES KILPATRICK, Craigie Mains, Kilmarnock.
1945	<p>.....</p> <p>Captain R. J. THOMSON, Kaimes, West Linton.</p> <p>JAMES M'LAREN, Alton of Bandeath, Stirling.</p> <p>PETER W. CRAWFORD, Dryfeholm, Lockerbie.</p> <p>IAN C. MENZIES, O.B.E., Broomhills, Liberton, Edinburgh.</p> <p>RALPH S. MACWILLIAM, The Croft, Nairn.</p>
1946	<p>THOMAS BLACK, Balig, Doonfoot, Ayr.</p> <p>WILLIAM J. REID, Fordhouse of Dun, Montrose.</p> <p>WILLIAM HOGG, Clackmae, Earlston.</p> <p>JAMES R. LUMSDEN, C.B.E., of Arden, Alexandria, Dunbartonshire.</p> <p>J. W. ALEXANDER, M.V.O., Langshaw, Moffat.</p> <p>J. C. WALLACE MANN, Carrington Barns, Gorebridge, Midlothian.</p> <p>Brigadier J. E. STIRLING, Holme Rose, Croy, Gollanfield. (Elected 7th January 1948.)</p> <p>WILLIAM H. LAWSON, Craigie Villa, Elie. (Elected 7th January 1948.)</p>
1947	<p>JOHN L. SLEIGH, Newseat of Tolquhon, Tarves, Aberdeenshire.</p> <p>Captain THOMAS ELLIOT, O.B.E., Thirlestane, Lauder.</p> <p>THOMAS GRAHAM REID, Netherton, Bridge of Allan.</p> <p>PETER GORDON, Balcraig, Port William, Wigtownshire.</p> <p>ROBERT BALFOUR KERR, Barney Mains, Haddington.</p> <p>GEORGE CLYNES of Noss, Wick, Caithness.</p> <p>ARCHIBALD J. ELDER, Pitbauchlie, Dunfermline.</p> <p>Lieut.-Colonel Sir GUY SHAW-STEWART, Bt., M.C., Ardgowan, Inverkip, Renfrewshire.</p>
1948	<p>JOHN L. ARNOTT, Haymount, Makerstoun, Kelso.</p> <p>J. E. KERR, C.B.E., of Harviestoun, Dollar.</p> <p>ADAM GRAY, Ingleston, Borgue, Kirkcudbright.</p> <p>R. H. WATHERSTON, Crichton Mains, Ford, Midlothian.</p> <p>FRANCIS W. WALKER of Leys, Leys Castle, Inverness.</p> <p>ALEXANDER D. C. MAIN, B.Sc., Windyedge, by Perth.</p> <p>WILLIAM BROWN, Craigton, Bishopton, Renfrewshire.</p> <p>Major A. L. P. F. WALLACE of Candacraig, Strathdon, Aberdeenshire.</p>

Year of
Election.

Extraordinary Directors.

- | | | |
|------|---|--|
| 1947 | { | R. SCOTT AITON, M.C., Legerwood, Earlston. |
| | | Captain JAMES CRAIG, Gwydyr House, Comrie Road, Crieff. |
| | | WILLIAM D. SIMPSON, Highfield, North Berwick. |
| | | J. NORMAN H. STEELE, B.Sc.(Agric.), 61 Harrison Road, Edinburgh. |
| 1948 | { | JAMES WITHER, Awhirk, Stranraer. |
| | | WILLIAM ALLISON, Almond Hill, Kirkliston. |
| | | JAMES DURNO, C.B.E., Uppermill, Tarves, Aberdeenshire. |
| | | WILLIAM MONTGOMERY, Banks, Kirkcudbright. |
| | | Captain IAN S. ROBERTSON, M.C., Linkwood, Elgin. |
| | | MATTHEW TEMPLETON, Goshen Bank, Kelso. |

Show Division Directors.

WILLIAM BELFRAGE BLACK, Holton House, Milnathort.
 THOMAS CLARK, Muirtons, Perth.
 HARRY H. EDIE, Cornceres, Anstruther.
 JOHN M. FAIRLIE, Kirkton, Monikie, by Dundee.
 A. W. HOWISON, Rannagulzion, Blairgowrie.
 JOHN NIVEN, Gloagburn, Tibbermore, Perth.
 JOHN PROVAN, The Grange, Dunfermline.
 Sir J. DENBY ROBERTS, Bt., Strathallan Castle, Auchterarder.
 FRANCIS W. ROGER, Kenley Green, St Andrews.
 JAMES L. WHYTE, Hayston, Forfar.

Chief Officials, &c.

Sir JOSHUA ROSS-TAYLOR, Mungoswalls, Duns, *Treasurer*.
 Major R. F. BREBNER, C.B.E., The Leuchold, Dalmeny House, Edinburgh,
Honorary Secretary.
 R. M. LEMMON, B.L., 8 Eglinton Crescent, Edinburgh, *Secretary*.
 HARRY F. CURRIE, *Chief Clerk*.
*Second Clerk*.
 GEORGE JAMES GREGOR, C.A., 8 York Place, Edinburgh, *Auditor*.
 HENRY RAESIDE, 8 Eglinton Crescent, Edinburgh, *Master of Works*.
 A. E. CAMERON, M.A., D.Sc., University of Edinburgh, 10 George Square,
 Edinburgh, *Consulting Zoologist*.
 The Very Rev. CHARLES L. WARR, D.D., 63 Northumberland Street,
 Edinburgh, *Chaplain*.
 TODS, MURRAY & JAMIESON, W.S., 66 Queen Street, Edinburgh, *Law*
Agents.
 WILLIAM BLACKWOOD & SONS LTD., 45 George Street, Edinburgh,
Publishers.
 HAMILTON & INCHES, Princes Street, Edinburgh, *Silversmiths*.
 ALEXANDER KIRKWOOD & SON, 9 St James' Square, Edinburgh, *Medallists*.
 JOHN MENZIES & CO. LTD., 6 Castle Street, Edinburgh, *Advertising Agents*.
 ALEXANDER HALL & SON LTD., 15 Mid Stocket Road, Aberdeen, *Showyard*
Erectors.
 J. P. LAUDER, *Officer and Caretaker*.

Chairman of Board of Directors.

JAMES R. LUMSDEN, C.B.E., of Arden, Alexandria, Dunbartonshire.

Chairmen of Committees.

1. *Argyll Naval Fund* . . . JAMES R. LUMSDEN, C.B.E., of Arden,
Alexandria, Dunbartonshire.
2. *Finance, Chambers, and Law* Sir JOSHUA ROSS-TAYLOR, Mungoswalls,
Duns.
3. *Publications* . . . JAMES R. LUMSDEN, C.B.E., of Arden,
Alexandria, Dunbartonshire.
4. *Shows* . . . THOMAS A. WEDDERSPOON, Castleton,
Eassie, Angus.
5. *Implements and Machinery* . WILLIAM D. SIMPSON, Highfield, North
Berwick.
6. *Science* . . . J. W. ALEXANDER, M.V.O., Langshaw,
Moffat.
7. *General Purposes* . . . JAMES R. LUMSDEN, C.B.E., of Arden,
Alexandria, Dunbartonshire.
8. *Education* . . . Sir JOSHUA ROSS-TAYLOR, Mungoswalls,
Duns.
9. *Office-bearers* . . . JAMES R. LUMSDEN, C.B.E., of Arden,
Alexandria, Dunbartonshire.

COMMITTEES FOR 1948-1949

1. ARGYLL NAVAL FUND.

JAMES R. LUMSDEN, C.B.E., of Arden, Alexandria, Dunbartonshire,
Convener.

Major R. F. BREBNER, C.B.E., The Leuchold, Dalmeny House, Edinburgh.

Sir GEORGE I. CAMPBELL of Succoth, Bt., Crarae Lodge, Minard, Argyll.

IAN M. CAMPBELL, Bal Blair, Invershin.

Captain JAMES CRAIG, Gwydyr House, Comrie Road, Crieff.

JAMES DURNO, C.B.E., Uppermill, Tarves.

The EARL OF ELGIN AND KINCARDINE, K.T., C.M.G., Broomhall, Dunfermline.

The EARL OF HOME, K.T., The Hirsell, Coldstream.

J. E. KERR, C.B.E., of Harviestoun, Dollar.

ANDREW R. PAGE, Argyll Estates Office, Inveraray.

Sir J. DENBY ROBERTS, Bt., Strathallan Castle, Auchterarder.

Sir JOSHUA ROSS-TAYLOR, Mungoswalls, Duns.

Lieut.-Colonel Sir GUY SHAW-STEWART, Bt., M.C., Ardgowan, Inverkip.

2. FINANCE, CHAMBERS, AND LAW.

Sir JOSHUA ROSS-TAYLOR, Mungoswalls, Duns, Treasurer, *Convener.*

J. W. ALEXANDER, M.V.O., Langshaw, Moffat.

JAMES DURNO, C.B.E., Uppermill, Tarves.

J. E. KERR, C.B.E., of Harviestoun, Dollar.

JAMES KILPATRICK, Craigie Mains, Kilmarnock.

JAMES R. LUMSDEN, C.B.E., of Arden, Alexandria, Dunbartonshire.

IAN C. MENZIES, O.B.E., Broomhills, Liberton, Edinburgh.

Captain IAN S. ROBERTSON, Linkwood, Elgin.

WILLIAM D. SIMPSON, Highfield, North Berwick.

Captain R. J. THOMSON, Kaimes, West Linton.

FRANCIS W. WALKER of Leys, Leys Castle, Inverness.

JAMES WITHER, Awhirk, Stranraer.

Major R. F. BREBNER, C.B.E., The Leuchold, Dalmeny House, Edinburgh,

Honorary Secretary, *ex officio.*

GEORGE JAMES GREGOR, C.A., Auditor, *ex officio.*

3. PUBLICATIONS.

JAMES R. LUMSDEN, C.B.E., of Arden, Alexandria, Dunbartonshire,
Convener.

R. SCOTT AITON, M.C., Legerwood, Earlston.

J. W. ALEXANDER, M.V.O., Langshaw, Moffat.

THOMAS BLACK, Balig, Doonfoot, Ayr.

PETER W. CRAWFORD, Dryfeholm, Lockerbie.

JAMES DURNO, C.B.E., Uppermill, Tarves.

The EARL OF ELGIN AND KINCARDINE, K.T., C.M.G., Broomhall, Dunfermline.

J. E. KERR, C.B.E., of Harviestoun, Dollar.

ROBERT BALFOUR KERR, Barney Mains, Haddington.

ALEXANDER D. C. MAIN, B.S., Windyedge, by Perth.

WILLIAM MONTGOMERY, Banks, Kirkcudbright.
 WILLIAM J. REID, Fordhouse of Dun, Montrose.
 Captain IAN S. ROBERTSON, Linkwood, Elgin.
 Sir JOSHUA ROSS-TAYLOR, Mungoswalls, Duns.
 Captain R. J. THOMSON, Kaimes, West Linton.
 Major R. F. BREBNER, C.B.E., The Leuchold, Dalmeny House, Edinburgh,
 Honorary Secretary, *ex officio*.

4. SHOWS.

THOMAS A. WEDDERSPOON, Castleton, Eassie, Angus, *Convener*.
 Lieut.-Colonel Sir GUY SHAW-STEWART, Bt., M.C., Ardgowan, Inverkip,
Vice-Convener.
 R. SCOTT AITON, M.C., Legerwood, Earlstoun.
 J. W. ALEXANDER, M.V.O., Langshaw, Moffat.
 WILLIAM ALLISON, Almond Hill, Kirkliston.
 JOHN L. ARNOTT, Haymount, Makerstoun, Kelso.
 THOMAS BLACK, Balig, Doonfoot, Ayr.
 WILLIAM BELFRAGE BLACK, Holton House, Milnathort.
 WILLIAM BROWN, Craigton, Bishopton, Renfrewshire.
 THOMAS CLARK, Muirtons, Perth.
 GEORGE CLYNE of Noss, Wick.
 Captain JAMES CRAIG, Gwydyr House, Comrie Road, Crieff.
 PETER W. CRAWFORD, Dryfeholm, Lockerbie.
 JAMES DURNO, C.B.E., Uppermill, Tarves.
 HARRY H. EDIE, Cornceres, Anstruther.
 ARCHIBALD J. ELDER, Pitbauchlie, Dunfermline.
 The EARL OF ELGIN AND KINCARDINE, K.T., C.M.G., Broomhall, Dunfermline.
 Captain THOMAS ELLIOT, O.B.E., Thirlestane, Lauder.
 JOHN M. FAIRLIE, Kirkton, Monikie, by Dundee.
 PETER GORDON, Balcraig Moor, Port William.
 ADAM GRAY, Ingleston, Borgue, Kirkcudbright.
 WILLIAM HOGG, Clackmae, Earlstoun.
 A. W. HOWISON, Rannagulzion, Blairgowrie.
 J. E. KERR, C.B.E., of Harviestoun, Dollar.
 ROBERT BALFOUR KERR, Barney Mains, Haddington.
 JAMES KILPATRICK, Craigie Mains, Kilmarnock.
 WILLIAM H. LAWSON, Craigie Villa, Elie.
 JAMES R. LUMSDEN, C.B.E., of Arden, Alexandria, Dunbartonshire.
 JAMES M'LAREN, Alton of Bandeath, Stirling.
 RALPH S. MACWILLIAM, The Croft, Nairn.
 ALEXANDER D. C. MAIN, B.Sc., Windyedge, by Perth.
 J. C. WALLACE MANN, Carrington Barns, Gorebridge, Midlothian.
 IAN C. MENZIES, O.B.E., Broomhills, Liberton, Edinburgh.
 WILLIAM MONTGOMERY, Banks, Kirkcudbright.
 JOHN NIVEN, Gloagburn, Tibbermore, Perth.
 JOHN PROVAN, The Grange, Dunfermline.
 THOMAS GRAHAM REID, Netherton, Bridge of Allan.
 WILLIAM J. REID, Fordhouse of Dun, Montrose.
 Sir J. DENBY ROBERTS, Bt., Strathallan Castle, Auchterarder.
 Captain IAN S. ROBERTSON, Linkwood, Elgin.
 FRANCIS W. ROGER, Kenley Green, St Andrews.
 Sir JOSHUA ROSS-TAYLOR, Mungoswalls, Duns.
 WILLIAM D. SIMPSON, Highfield, North Berwick.
 JOHN L. SLEIGH, Newseat of Tolquhon, Tarves.
 J. NORMAN H. STEELE, B.Sc.(Agric.), 61 Harrison Road, Edinburgh.
 Brigadier J. E. STIRLING, Holme Rose, Croy, Gollanfield.
 MATTHEW TEMPLETON, Goshen Bank, Kelso.

Captain R. J. THOMSON, Kaimes, West Linton.
 FRANCIS W. WALKER of Leys, Leys Castle, Inverness.
 Major A. L. P. F. WALLACE of Candacraig, Strathdon, Aberdeenshire.
 R. H. WATHERSTON, Crichton Mains, Ford, Midlothian.
 JAMES L. WHYTE, Hayston, Forfar.
 JAMES WITHER, Awhirk, Stranraer.
 Major R. F. BREBNER, C.B.E., The Leuchold, Dalmeny House, Edinburgh,
 Honorary Secretary, *ex officio*.

5. IMPLEMENTS AND MACHINERY.

WILLIAM D. SIMPSON, Highfield, North Berwick, *Convener*.
 THOMAS A. WEDDERSPOON, Castleton, Eassie, Angus, *Vice-Convener*.
 R. SCOTT AITON, M.C., Legerwood, Earlston.
 J. W. ALEXANDER, M.V.O., Langshaw, Moffat.
 WILLIAM ALLISON, Almond Hill, Kirkliston.
 THOMAS BLACK, Balig, Doonfoot, Ayr.
 Captain JAMES CRAIG, Gwydyr House, Comrie Road, Crieff.
 PETER W. CRAWFORD, Dryfeholm, Lockerbie.
 JAMES DURNO, C.B.E., Uppermill, Tarves.
 Captain THOMAS ELLIOT, O.B.E., Thirlestane, Lauder.
 PETER GORDON, Balcraig, Port William.
 ADAM GRAY, Ingleston, Borgue, Kirkcudbright.
 J. E. KERR, C.B.E., of Harviestoun, Dollar.
 ROBERT BALFOUR KERR, Barney Mains, Haddington.
 JAMES M'LAREN, Alton of Bandeath, Stirling.
 ALEXANDER D. C. MAIN, B.Sc., Windyedge, by Perth.
 J. C. WALLACE MANN, Carrington Barns, Gorebridge, Midlothian.
 IAN C. MENZIES, O.B.E., Broomhills, Liberton, Edinburgh.
 WILLIAM MONTGOMERY, Banks, Kirkcudbright.
 JOHN NIVEN, Gloagburn, Tibbermore.
 Captain IAN S. ROBERTSON, Linkwood, Elgin.
 JOHN L. SLEIGH, Newseat of Tolquhon, Tarves.
 J. NORMAN H. STEELE, B.Sc.(Agric.), 61 Harrison Road, Edinburgh.
 FRANCIS W. WALKER of Leys, Leys Castle, Inverness.
 R. H. WATHERSTON, Crichton Mains, Ford, Midlothian.
 JAMES WITHER, Awhirk, Stranraer.
 JAMES R. LUMSDEN, C.B.E., of Arden, Dunbartonshire, Chairman of
 Board of Directors, *ex officio*.
 Major R. F. BREBNER, C.B.E., The Leuchold, Dalmeny House, Edinburgh,
 Honorary Secretary, *ex officio*.

6. SCIENCE.

J. W. ALEXANDER, M.V.O., Langshaw, Moffat, *Convener*.
 R. SCOTT AITON, M.C., Legerwood, Earlston, *Vice-Convener*.
 THOMAS BLACK, Balig, Doonfoot, Ayr.
 WILLIAM BROWN, Craigton, Bishopston, Renfrewshire.
 GEORGE CLYNE of Noss, Wick.
 Captain JAMES CRAIG, Gwydyr House, Comrie Road, Crieff.
 PETER W. CRAWFORD, Dryfeholm, Lockerbie.
 JAMES DURNO, C.B.E., Uppermill, Tarves.
 ARCHIBALD J. ELDER, Pitbauchlie, Dunfermline.
 The EARL OF ELGIN AND KINCARDINE, K.T., C.M.G., Broomhall, Dunfermline.
 Captain THOMAS ELLIOT, O.B.E., Thirlestane, Lauder.
 PETER GORDON, Balcraig Moor, Port William.
 WILLIAM HOGG, Clackmae, Earlston.
 J. E. KERR, C.B.E., of Harviestoun, Dollar.

JAMES KILPATRICK, Craigie Mains, Kilmarnock.
 WILLIAM H. LAWSON, Craigie Villa, Elie.
 JAMES R. LUMSDEN, C.B.E., of Arden, Alexandria, Dunbartonshire.
 JAMES M'LAREN, Alton of Bandeath, Stirling.
 RALPH S. MACWILLIAM, The Croft, Nairn.
 IAN C. MENZIES, O.B.E., Broomhills, Liberton, Edinburgh.
 WILLIAM MONTGOMERY, Banks, Kirkcudbright.
 THOMAS GRAHAM REID, Netherton, Bridge of Allan.
 WILLIAM J. REID, Fordhouse of Dun, Montrose.
 Captain IAN S. ROBERTSON, Linkwood, Elgin.
 Sir JOSHUA ROSS-TAYLOR, Mungoswalls, Duns.
 WILLIAM D. SIMPSON, Highfield, North Berwick.
 MATTHEW TEMPLETON, Goshen Bank, Kelso.
 Captain R. J. THOMSON, Kaimes, West Linton.
 FRANCIS W. WALKER of Leys, Leys Castle, Inverness.
 Major A. L. P. F. WALLACE of Candacraig, Strathdon, Aberdeenshire.
 JAMES WITHER, Awhirk, Stranraer.
 Major R. F. BREBNER, C.B.E., The Leuchold, Dalmeny House, Edinburgh,
 Honorary Secretary, *ex officio*.
 A. E. CAMERON, M.A., D.Sc., University of Edinburgh, 10 George Square,
 Edinburgh, Consulting Zoologist, *ex officio*.

7. GENERAL PURPOSES.

JAMES R. LUMSDEN, C.B.E., of Arden, Alexandria, Dunbartonshire,
 Chairman of Board of Directors, *Convener*.
 R. SCOTT AITON, M.C., Legerwood, Earlston.
 J. W. ALEXANDER, M.V.O., Langshaw, Moffat.
 WILLIAM ALLISON, Almond Hill, Kirkliston.
 THOMAS BLACK, Balig, Doonfoot, Ayr.
 JAMES DURNO, C.B.E., Uppermill, Tarves.
 The EARL OF ELGIN AND KINCARDINE, K.T., C.M.G., Broomhall, Dunfermline.
 Captain THOMAS ELLIOT, O.B.E., Thirlestane, Lauder.
 WILLIAM HOGG, Clackmac, Earlston.
 J. E. KERR, C.B.E., of Harviestoun, Dollar.
 ROBERT BALFOUR KERR, Barney Mains, Haddington.
 JAMES M'LAREN, Alton of Bandeath, Stirling.
 J. C. WALLACE MANN, Carrington Barns, Gorebridge, Midlothian.
 IAN C. MENZIES, O.B.E., Broomhills, Liberton, Edinburgh.
 Sir JOSHUA ROSS-TAYLOR, Mungoswalls, Duns.
 WILLIAM D. SIMPSON, Highfield, North Berwick.
 MATTHEW TEMPLETON, Goshen Bank, Kelso.
 Captain R. J. THOMSON, Kaimes, West Linton.
 R. H. WATHERSTON, Crichton Mains, Ford, Midlothian.
 Major R. F. BREBNER, C.B.E., The Leuchold, Dalmeny House, Edinburgh,
 Honorary Secretary, *ex officio*.

8. EDUCATION.

Sir JOSHUA ROSS-TAYLOR, Mungoswalls, Duns, *Convener*.
 Major R. F. BREBNER, C.B.E., The Leuchold, Dalmeny House, Edinburgh.
 JAMES R. LUMSDEN, C.B.E., of Arden, Alexandria, Dunbartonshire.
 J. C. WALLACE MANN, Carrington Barns, Gorebridge, Midlothian.
 IAN C. MENZIES, O.B.E., Broomhills, Liberton, Edinburgh.
 JOHN STIRTON, O.B.E., 8 Eglinton Crescent, Edinburgh.

9. OFFICE-BEARERS.

Constitution : (1) The four Ordinary Directors for the Division in which the Show for the year is to be held (with the exception of one retiring next year) ; (2) one Ordinary Director from each of the other Show Divisions ; and (3) the Chairman of the Board, Treasurer, and Hon. Secretary, *ex officio*.

<i>Glasgow</i>	. THOMAS BLACK, Balig, Ayr ; Lieut.-Colonel Sir GUY SHAW-STEWART, Bt., M.C., Ardgowan, Inverkip ; WILLIAM BROWN, Craigton, Bishopton, Renfrewshire.
<i>Aberdeen</i>	. WILLIAM J. REID, Fordhouse of Dun, Montrose.
<i>Borders</i>	. WILLIAM HOGG, Clackmae, Earlstoun.
<i>Stirling</i>	. THOMAS GRAHAM REID, Netherton, Bridge of Allan.
<i>Dumfries</i>	. J. W. ALEXANDER, M.V.O., Langshaw, Moffat.
<i>Edinburgh</i>	. J. C. WALLACE MANN, Carrington Barns, Gorebridge, Midlothian.
<i>Inverness</i>	. Brigadier J. E. STIRLING, Holme Rose, Croy, Gollanfield.
<i>Perth</i>	. ALEXANDER D. C. MAIN, B.Sc., Windyedge, by Perth.

JAMES R. LUMSDEN, C.B.E., of Arden, Alexandria, Dunbartonshire, Chairman of Board of Directors, *ex officio*.

Sir JOSHUA ROSS-TAYLOR, Mungoswalls, Duns, Treasurer, *ex officio*.

Major R. F. BREBNER, C.B.E., The Leuchold, Dalmeny House, Edinburgh, Honorary Secretary, *ex officio*.

REPRESENTATIVES ON OTHER BODIES

National Agricultural Examination Board and National Dairy Examination Board.

Major R. F. BREBNER, C.B.E., The Leuchold, Dalmeny House, Edinburgh.
 JAMES R. LUMSDEN, C.B.E., of Arden, Alexandria, Dunbartonshire.
 J. C. WALLACE MANN, Carrington Barns, Gorebridge, Midlothian.
 IAN C. MENZIES, O.B.E., Broomhills, Liberton, Edinburgh.
 Sir JOSHUA ROSS-TAYLOR, Mungoswalls, Duns.
 JOHN STIRTON, O.B.E., 8 Eglinton Crescent, Edinburgh.

Edinburgh and East of Scotland College of Agriculture.

JOHN STIRTON, O.B.E., 8 Eglinton Crescent, Edinburgh.

West of Scotland Agricultural College.

JAMES R. LUMSDEN, C.B.E., of Arden, Alexandria, Dunbartonshire.

Aberdeen and North of Scotland College of Agriculture.

JAMES DURN, C.B.E., Uppermill, Tarves.

Royal (Dick) Veterinary College.

WILLIAM D. SIMPSON, Highfield, North Berwick.

Glasgow Veterinary College.

THOMAS BLACK, Balig, Doonfoot, Ayr.

Animal Diseases Research Association.

JAMES WITHER, Awhirk, Stranraer.

Scottish Agricultural Organisation Society, Ltd.

WILLIAM ALLISON, Almond Hill, Kirkliston.

WILLIAM D. SIMPSON, Highfield, North Berwick.

Scottish Milk Records Association.

JAMES KILPATRICK, Craigie Mains, Kilmarnock.

JAMES WITHER, Awhirk, Stranraer.

National Trust for Scotland.

J. C. WALLACE MANN, Carrington Barns, Gorebridge, Midlothian.

Royal Scottish Agricultural Benevolent Institution.

JAMES R. LUMSDEN, C.B.E., of Arden, Alexandria, Dunbartonshire.

Association for the Preservation of Rural Scotland.

J. W. ALEXANDER, M.V.O., Langshaw, Moffat.

Scottish Country Industries Development Trust.

The EARL OF ELGIN AND KINCARDINE, K.T., C.M.G., Broomhall, Dunfermline.

Scottish Association of Young Farmers' Clubs.

R. H. WATHERSTON, Crichton Mains, Ford, Midlothian.

Scottish Council of Social Service.

R. SCOTT AITON, M.C., Legerwood, Earlston.

SCOTTISH PLANT REGISTRATION STATION.

Standing Committee of Management.

Major R. F. BREBNER, C.B.E., The Leuchold, Dalmeny House, Edinburgh.	} <i>Appointed for 5 years from 1st January 1946.</i>
WILLIAM D. SIMPSON, Highfield, North Berwick.	
JAMES WITHER, Awhirk, Stranraer.	

MEETINGS.

General Meetings.—By the Charter the Society must hold two General Meetings each year, and, under ordinary circumstances, they are held in the months of January and June, for the election of Members and other business. Twenty a quorum.

By a resolution of the General Meeting held on 15th January 1879, a General Meeting of Members is held in the Showyard on the occasion of the Annual Show.

With reference to motions at General Meetings, Bye-Law No. 19 provides that—"At General Meetings of the Society no motion or proposal (except of mere form or courtesy) shall be submitted or entertained for immediate decision unless notice thereof has been given two weeks previously to the Board of Directors, without prejudice, however, to the competency of a motion or proposal, of which due notice has not been given, being remitted to the Directors for consideration, and thereafter being disposed of at a future General Meeting."

Directors' Meetings.—The Board of Directors meet (except when otherwise arranged) on the first Wednesday of each month from November to June, inclusive, at 1.30 P.M., and occasionally as business may require, on a requisition by three Directors to the Secretary, or on intimation by him. Seven a quorum.

Committee Meetings.—Meetings of the various Committees are held as required.

Nomination of Directors.—Meetings of Members, for the purpose of nominating Directors to represent the Show Divisions on the Board for the year 1950-1951, will be held at the places and on the days after-mentioned :—

DIVISION.		
1. <i>Edinburgh.</i>	Market Buildings, Gorgie, Edinburgh	. Wed., 25th Jan. 1950, at 1.
2. <i>Glasgow.</i>	Central Station Hotel, Glasgow	. Wed., 8th Feb. 1950, at 1.
3. <i>Stirling.</i>	Golden Lion Hotel, Stirling	. Thur., 9th Feb. 1950, at 1.30.
4. <i>Perth.</i>	Station Hotel, Cupar	. Tues., 14th Feb. 1950, at 2.30.
(The Meeting will be held in 1951 at Cupar and in 1952 at Perth.)		
5. <i>Borders.</i>	Baillie Memorial Hall, St Boswells	. Thur., 16th Feb. 1950, at 2.
6. <i>Inverness.</i>	Station Hotel, Inverness	. Tues., 21st Feb. 1950, at 2.
7. <i>Aberdeen.</i>	Imperial Hotel, Aberdeen	. Fri., 24th Feb. 1950, at 2.30.
8. <i>Dumfries.</i>	King's Arms Hotel, Dumfries	. Wed., 8th March 1950, at 2.30.

The nomination of a Proprietor or other Member paying the higher subscription must be made in the 3rd, 6th, 7th and 8th Divisions ; and the nomination of a Tenant-Farmer or other Member paying the lower subscription in the 1st, 2nd, 4th and 5th Divisions.

A Member who has served as an Ordinary Director for a term of four years is not eligible to be nominated again till after the lapse of at least one year. An Extraordinary Director may, however, be nominated as an Ordinary Director.

GENERAL SHOW.

The 111th Annual Show of Stock, Implements and Machinery, &c., will be held at Paisley on 20th, 21st, 22nd, and 23rd June 1950.

EXAMINATIONS.

Agriculture.—In order to assist candidates at the English and Welsh Colleges, the Examination in 1949 for the National Diploma in Agriculture will be held (1) at Edinburgh on Wednesday, 6th April, and following days. Applications close on Thursday, 17th February ; (2) at Leeds on Tuesday, 12th July, and following days. Applications close on Tuesday, 17th May.

Dairying.—The Examinations in 1949 for the National Diploma in Dairying, the National Diploma in Dairy Husbandry and the National Diploma in Dairy Technology will be held as under :—

SCOTLAND.—At the Dairy School for Scotland, Auchincruive, Ayr : *Written*—On Tuesday, Wednesday, Thursday, and Friday, 6th, 7th, 8th, and 9th September. *Oral and Practical*—On Monday, 19th September, and following days. Last date for receiving applications, Tuesday, 2nd August.

ENGLAND.—At the University and British Dairy Institute, Reading, on Tuesday, 6th September, and following days. Last date for receiving applications, Tuesday, 26th July.

Forestry.—The Final Examination for the Society's First and Second-Class Certificates in Forestry was held in 1935.

In view of the institution of Examinations for Certificates and Diplomas in Forestry by the Royal Scottish Forestry Society, and by arrangement with that Society, the Board of Directors of The Highland and Agricultural Society of Scotland resolved in 1935 to cease holding further Examinations for the First and Second-Class Certificates, and that, in future, the granting of Certificates and Diplomas be left in the hands of the Royal Scottish Forestry Society.

All communications in connection with Examinations in Forestry should now be addressed to the Secretary, Royal Scottish Forestry Society, 8 Rutland Square, Edinburgh 1.

NATIONAL DIPLOMA IN AGRICULTURE

By a Supplementary Charter under the Great Seal, granted in 1856, the Society is empowered to grant Diplomas.

From 1858 to 1899 the Society held an annual Examination for Certificate and Diploma in Agriculture. In 1873 the Free Life Membership of the Society was granted to winners of the Diploma. In 1882 permission was given to holders of the Diploma to append the letters F.H.A.S. to their names. These arrangements terminated in 1899.

In 1898 it was resolved by the Royal Agricultural Society of England and the Highland and Agricultural Society of Scotland to discontinue the independent Examinations in Agriculture held by the two Societies, and to institute in their stead a Joint Examination for a NATIONAL DIPLOMA IN AGRICULTURE (N.D.A.). This Examination is conducted under the management of "The National Agricultural Examination Board" appointed by the two Societies.

FUTURE N.D.A. EXAMINATIONS

Examinations based on the following syllabus will be held in 1950, 1951, and 1952 as follows :—

- 1950.—For candidates appearing for the whole examination ;
for a first or second group of subjects ; reappearing
for one, two, or three subjects ; or reappearing for a
second group of subjects.
- 1951.—For candidates appearing for a second group of subjects ;
reappearing for one, two, or three subjects ; or
reappearing for a second group of subjects only.
- 1952. —For candidates reappearing for one, two, or three subjects,
or reappearing for a second group of subjects only.

These examinations will be in addition to examinations based on revised regulations and syllabus approved by the Board, October 1948. The first examination under the revised regulations will be held in 1950.

REGULATIONS FOR EXAMINATION IN THE SCIENCE AND PRACTICE OF AGRICULTURE

1. The Societies may hold conjointly, under the management of the National Agricultural Examination Board appointed by them, an Annual Examination in the Science and Practice of Agriculture, at a convenient centre.

2. Candidates who pass the Examination will receive the National Diploma in Agriculture—the Diploma to be distinguished shortly by the letters "N.D.A."

3. The Examination will be conducted by means of written papers and oral examinations.

4. In order to be eligible to sit for the Board's Examination in Agriculture, a candidate must—

(a) Present a certificate from a recognised Agricultural College that his attainments in the subjects of *General Botany, Geology, General Chemistry, Physics, and Mechanics*, as attested by class and other examinations, are, in the opinion of the authorities of the College, such as to justify his admission to the Board's Examination; *or*

(b) Produce evidence that he has passed the 1st B.Sc. or the Intermediate Examination in Science of a British University; *or*

(c) Present a School Certificate awarded by a British University Examination Board, and produce evidence that he has continued his study of science for at least a year and has obtained a certificate in Physics, Chemistry, and Botany at the Higher Certificate Examination of a British University Examination Board; *or*

(d) Present a Leaving Certificate in Science (including Chemistry and Botany) of the Scottish Education Department.

5. In the case of students who satisfy the Board that they have not had the facilities for obtaining the foregoing certificates, the Board will be prepared to consider evidence of equivalent attainment. [Applications under this rule must be lodged *three months* before the date of the annual examination.]

6. *Before sitting for the PRACTICAL AGRICULTURE and FARM MACHINERY AND IMPLEMENTS papers, all candidates must produce evidence of possessing a practical knowledge of Agriculture obtained by residence on a farm in the British Isles for a period or periods (not more than two) covering a complete year of farming operations.*

7. Candidates will have the option of taking the whole of the following nine papers at one time, or of sitting for a group of *any three, four, or five* in the first year and the remaining subjects (at one examination) within the next two years:—

SUBJECT.	Maximum Marks.	Pass Marks.
1. Practical Agriculture (First Paper)	400	240
2. Practical Agriculture (Second Paper)	400	240
3. Farm Machinery and Implements	300	150
4. Land Surveying and Farm Buildings	100	50
5. Agricultural Chemistry	200	100
6. Agricultural Botany	200	100
7. Agricultural Book-keeping	200	100
8. Agricultural Zoology	100	50
9. Veterinary Science and Hygiene	200	100
	<hr/> 2100	<hr/> 1130

NOTE.—Candidates taking the Examination in two groups of subjects are recommended to take Agricultural Chemistry and Agricultural Botany in the first group.

8. A candidate who obtains not less than three-fourths (1575) of the aggregate maximum marks (2100) in the entire Examination will receive the Diploma with Honours, provided that he obtains not less than three-fourths (600) of the maximum marks (800) in the two Practical Agriculture papers.

9. Candidates electing to take the entire Examination at one time and failing in not more than three subjects may appear for these subjects in the following year. Failure in more than three subjects will be regarded as failure in the whole Examination.

10. In the case of candidates electing to take the Examination in two groups—

(a) A candidate appearing for a group of *three* subjects and failing in a single subject may, *in the case of a first group*, appear for that subject along with the second group, or, *in the case of a second group*, in the following year. Failure in more than one subject will be regarded as failure in the group.

(b) A candidate appearing for a group of *four* or more subjects and failing in not more than two subjects may, *in the case of a first group*, appear for these subjects along with the second group, or, *in the case of a second group*, in the following year. Failure in more than two subjects will be regarded as failure in the group.

11. Non-returnable fees must be paid by candidates as follows :—

Entire Examination	Six guineas.
Group of subjects	Three guineas.
Reappearance for any subjects	10/6 per subject.

12. The Board reserve the right to postpone, abandon, or in any way, or at any time, modify an Examination, and also to decline at any stage to admit any particular candidate to the Examination.

EXAMINATIONS IN 1949.

The Board will hold two Examinations in 1949.

The Examinations will be held as under :—

SCOTLAND.—At the University of Edinburgh and in the Chambers of the Royal Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, on WEDNESDAY, 6th APRIL 1949, and following days. Last date for receiving Applications, THURSDAY, 17th FEBRUARY 1949.

ENGLAND.—At the University of Leeds, on TUESDAY, 12th JULY 1949, and following days. Last date for receiving Applications, TUESDAY, 17th MAY 1949.

Forms of Application for permission to sit at either Examination may be obtained from "The Secretary, Royal Agricultural Society of England, 16 Bedford Square, London, W.C.1"; or from "The Secretary, Royal Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, Edinburgh 12."

SYLLABUS OF SUBJECTS OF EXAMINATION

PRACTICAL AGRICULTURE.

1.—FIRST PAPER.

1. *British Farming*.—Arable, stock-raising, dairying—Approximate areas covered by the different systems—Typical examples of each—Area in Great Britain under chief crops—Numbers of live stock—The recent history of agriculture—Short summary of agricultural returns.

2. *Climate*.—The effect of climate on farming practice—Rainfall—Temperature—Prevailing winds—Weather forecasts.

3. *Soils*.—The influence of geological formations on the systems of farming—Classification of soils—Character and composition—Suitability for cultivation. Reclamation—Drainage—Irrigation—Warping—Application of lime and marl—Bare fallows—Tillage—Subsoiling—Deep and thorough cultivation.

4. *Manures*.—The manures of the farm—The treatment of farm-yard manure—The disposal of liquid manure and sewage—General manures—Special manures—Field trials of manures—The application of manures—Period of application and amounts used per acre—Unexhausted value of manures and feeding-stuffs.

5. *Crops*.—Wheat, barley, oats, rye, beans, peas, potatoes, turnips, swedes, mangolds, sugar beet, forage plants, hops, and other crops—Their adaptation to different soils and climates—Varieties—Selection of seed—Judging seeds—Cultivation, weeds and parasitic plants, best methods of prevention and eradication—Harvesting—Storing—Cost of production—Improvement of crops by selection and hybridising—Field trials—Methods which the farmer may adopt—Selection to resist disease—The principles of rotations—Rotations suitable for different soils and climates—Rotations and the maintenance of fertility—Green manuring—Leguminous crops in rotation—Catch crops—The advantages and disadvantages of rotations—Specialised farming—Management of Orchards.

6. *Grassland*.—Its management, cultivation, and harvesting.

2.—SECOND PAPER.

7. *Live Stock*.—The different breeds of British live stock—Their origin, characteristics, and comparative merits—Suitability for different districts—Breeding—General principles—Selection—Mating—Crossing—Rearing and general management—Breeding and rearing of horses, cattle, sheep, pigs, and poultry. Rearing colts and raising store stock—The foods of the farm—Their composition and suitability for different classes of stock—Purchased foods—Composition and special value—Rations for different kinds and ages of stock—Cost of producing beef, mutton, pork, and milk—Cost of feeding farm horses.

8. *The disposal of Crops, Produce, and Stock*.—Marketing grain and other crops—Sale of stock—Live weight—Dead weight.

9. *Milk*.—The production and treatment of milk—The manufacture of cheese, butter, &c.—The utilisation of by-products.

10. *Farming Capital*.—Calculations of the stocking and working of arable, stock, and dairy farms—Farm valuations—Rent and taxes.

11. *Labour*.—Organisation of labour—piece-work, time-work—labour costings.

12. *Renting a Farm*.—Indications of condition, productive power, and stock-carrying capacity—Leases—Conditions of occupancy.

N.B.—*It is essential that a candidate know his subject practically, and that he satisfy the Examiner of his familiarity with farm work and management.*

3.—FARM MACHINERY AND IMPLEMENTS.

1. *Power*.—The principle of action, construction, method of working, also care and management of steam engines and boilers, gas, oil and petrol engines and agricultural tractors. Cost and working expenses in connection with the above. Estimation of the brake horse-power of engines. Power derived from water. Measurement of the quantity of water flowing in a stream. General arrangement of water-power plants. Water-wheels. Turbines. Pumps—principle of action and construction. Flow of water through pipes. Hydraulic ram. Windmills.

2. *Agricultural Implements and Machinery*.—The mode of action and the general principles involved in the construction and working of farm implements and machinery. Arrangements of machinery with respect to the power plant. Pulleys and belting. Shafting and bearings. Lubrication. Lifting appliances. Strength and care of chains. Concrete and its use in the construction of simple foundations for engines and machines.

3. *Implements of Cultivation*.—Ploughs—Cultivators—Grubbers—Harrows—Drills. Manure Distributors. Seeding and planting implements.

4. *Implements of Harvesting*.—Mowing and Reaping machines—Combine harvesters—Pick-up balers—Rakes—Teddies—Elevators—Potato raisers—Beet harvesters.

5. *Implements of Transit*.—Carts, waggons, rick lifters, tractors.

6. *Threshing and Food-preparing Machinery*.—Threshing machines, stationary and portable—Screen Winnowers—Hummelers, Chaff cutters—Pulpers—Cake breakers.

7. *Dairy Appliances*.—Milking machines—Cream separators—Churns and other butter-working appliances—Milk delivery cans—Cheese-making utensils—Vats and presses.

N.B.—*Candidates are expected to have had some experience with agricultural machinery and implements under actual working conditions, and to be capable of illustrating their answers, when necessary, by intelligible sketches or diagrams.*

4.—LAND SURVEYING AND FARM BUILDINGS.

1. The use and adjustment of instruments employed in Surveying and Levelling other than the Theodolite.

2. Land surveying by chain, Plotting from field book, and determination of areas surveyed. The simpler "field problems."

3. *Levelling and plotting from field book.*

4. A knowledge of the various classes of maps published by the Ordnance Survey Department and their Scales.

5. *Roads and Fences.*—The construction and maintenance of farm roads, fences, and ditches.

6. *Land Drainage.*—Methods of draining; mole and pipe drains; cost of construction and maintenance.

7. *Buildings.*—Buildings required on different classes of farms—Economical arrangement of farm buildings—Materials—Construction—Ventilation—Drainage—Water supply—Dimensions of dairy, stables, cow-sheds, yard, courts, and piggeries—Accommodation for power—Implement, machinery, and cart sheds—Hay and grain sheds—Shelter sheds—Storage of manure.

N.B.—*Each candidate should have with him at the Examination a pair of compasses, scales of equal parts, including scales of one chain to the inch, 4 feet to the inch, 8 feet to the inch, and the scale fitting the Ordnance Map, $\frac{1}{2500}$ or 25·344 inches to the mile, a small protractor, a set-square, and a straight-edge about 18 inches in length.*

5.—AGRICULTURAL CHEMISTRY.

1. *The Atmosphere.*—Its composition and relations to plant and animal life.

2. *Water.*—Rain water—Soil water and drainage—Drinking water—Sewage and irrigation.

3. *The Soil.*—Origin, formation, and classification of soils—Sampling—Analysis—Composition of soils—The chemical and physical properties of soils—The water and air of the soil—Biological changes in the soil—The soil in relation to plant growth—Fertility—Causes of infertility—Improvement of soils.

4. *Manures.*—Theories of manuring—Classification of manures—Origin, nature, and characteristics of manures—Manufacture of manures—Composition, analysis, adulteration, and valuation of manures—Farmyard manure and other natural manures—Green-manuring—Liming, marling, claying—Artificial manures, their origin and manufacture—Fertilisers and Feeding Stuffs Act—Sampling of manures.

5. *Poisons, Antiseptics, and Preservatives.*—General chemical composition and character of insecticides, fungicides, antiseptics, and preservatives used on the farm.

6. *Plants and Crops.*—Constituents of plants—Assimilation and nutrition of plants—Sources of the nitrogen and other constituents of plants—Germination—Action of enzymes—Composition and manurial requirements of farm crops—Food products derived from crops—Manuring experiments.

7. *Animals.*—Composition of animal body—Animal nutrition—Digestion—Assimilation, metabolism, respiration, and excretion.

8. *Foods and Feeding.*—Constituents of foods—Origin, nature, and composition of chief feeding stuffs—Sampling, analysis, and adulteration of foods—Nutritive value and digestibility of food—Functions of chief food constituents—Energy values—Vitamins—Relation of foods to the production of work, meat, milk, and manure—Manurial residues of foods.

9. Dairy Chemistry.—The composition of milk, cream, butter, cheese, &c.—Conditions which influence the composition of milk and milk products—Action of ferments and enzymes on milk and milk products—Milk-testing—Analysis and adulteration of dairy products.

N.B.—Candidates who are in possession of Laboratory Notes are required to bring them to the Oral Examination in this subject.

6.—AGRICULTURAL BOTANY.

In addition to a *general knowledge* of the morphology, histology, and physiology of plants, candidates will be expected to possess a *detailed knowledge* of the following subjects:—

The classification of plants of importance in agriculture as shown by a detailed study of the genera, species, and botanical varieties of the British Crop Plants and Weeds included in the following families:—

Ranunculaceæ.	Umbelliferae.	Chenopodiaceæ.
Cruciferae.	Compositæ.	Polygonaceæ.
Caryophyllaceæ.	Solanaceæ.	Liliaceæ.
Leguminosæ.	Scrophulariaceæ.	Graminææ.
Rosaceæ.	Labiatae.	

British grasses of agricultural importance: recognition of, at any stage of growth. Habitats of important species. Constitution of the grass flora of good meadows and pastures. Composition of seed mixtures for temporary and permanent leys on various soils. The effects of artificial manures on the flora of grass land.

The weeds of arable and grass land. Poisonous and parasitic weeds. Methods of distribution by seed and vegetatively: of eradication. Weeds as soil indicators. Recognition of the seeds of the common weeds, particularly those characteristically found in clover, grass, &c., seed.

The chief varieties of wheat, barley, oats, clovers, roots, and other farm crops; their suitability for various climatic and soil conditions. The identification of the more important types of cereals by means of their grain characters. Characteristics of good and bad samples of cereals.

Identification of materials used in feeding cakes and meals.

Plant-breeding. Principles of heredity in plants. Pure lines. Fluctuating variability. Selection.

Disease in plants. Diseases due to the effects of parasitic fungi. Resistance to disease: conditions affecting. Fungoid diseases scheduled from time to time by the Ministry of Agriculture and Fisheries.

Yeasts and fermentation.

The general outlines of bacteriology: nitrogen fixation, nitrification, and denitrification. Putrefaction and the bacteriology of milk, butter, and cheese.

N.B.—Candidates who are in possession of Laboratory Notes are required to bring them to the Oral Examination in this subject.

7.—AGRICULTURAL BOOK-KEEPING.

1. Advantages of book-keeping to the farmer. Difficulties and how they can be overcome. Objects of book-keeping.

2. General principles of book-keeping. Double-entry system. Description and use of various books. Ledger, journal, cash-book, petty cash-book, day-books, &c. Entering transactions; posting; trial balance; closing the accounts. Single-entry system.

3. Special ledger accounts: Interest, depreciation, rent and rates, improvements, private and household expenses, profit and loss and capital; partnership accounts.

4. Bank business. Opening a bank account. Use of cheques. Deposits and overdrafts.

5. General office work; correspondence, order notes, invoices, rendering accounts, receipts, &c. Filing systems.

6. Farm valuations for book-keeping purposes. Dates for stock-taking and principles of valuation. The farm balance-sheet.

7. Systems of farm book-keeping. Conditions that determine the most suitable system. Advantages and drawbacks of each system.

8. Accounts for the owner-occupier. Treatment of rent. Incidence of rates and tithe in England and Scotland, and their treatment as between farm and estate accounts. Improvements and upkeep and the general principles relating to maintenance claims.

9. Cost accounting. General principles and methods. Advantages, objects, difficulties.

10. Interpretation of results from ordinary and from cost accounts. Precautions necessary. Use of accounts as a guide to efficient management.

11. Income Tax. How the farmer is assessed. Preparation of Income Tax return. Treatment of Income Tax in accounts.

8.—AGRICULTURAL ZOOLOGY.

The Examination is designed to test practical knowledge, and therefore candidates will be expected to recognise the animals of agricultural importance referred to in the Syllabus.

GENERAL.

A general knowledge of the characteristics of living animals and how they differ from plants.

One-celled animals, *e.g.*, Amoeba, and many-celled animals.

General outline of the classification of animals and the characters on which it is based.

Organic Evolution. Theories of Heredity.

SPECIAL.

I. *Invertebrates*.—A. The Worm Parasites of Stock. Flat and Round Worms. Structure and Life History, for example, of Liver-fluke, Tapeworm, Ascaris. The mode of life and life history of the chief worm enemies of the domesticated animals. Preventive and remedial measures.

B. The Arachnid enemies of Stock : Mange or Scab Mites, Demodex Mites, Ticks. External structure and life history. Control measures.

C. The Insect enemies of Stock : (a) External parasites, e.g., gadflies, warble flies, blue-bottles, green-bottles, stable fly, ked, lice; (b) Internal parasites, e.g., bot and warble flies.

D. Insects injurious to Crops : Structure and classification of insects. Mode of life and life history of the chief insect pests of agricultural crops.* Control, preventive and remedial measures—natural control; artificial control (Insecticides).

* *The chief pests are detailed in Pamphlets issued by the Ministry of Agriculture and Fisheries.*

E. Other invertebrates of agricultural importance, e.g., earth-worms, eelworms, slugs and snails, centipedes and millepedes, gall mites.

II. Vertebrates.—Birds: the commoner birds of farm importance, their recognition and an estimate of their work.

Mammals: Outstanding characters for recognition, and the economic importance of:—

1. Ungulata or Hoofed Mammals, e.g., horse, pig, cattle, sheep, deer.
2. Rodentia or Gnawing Mammals, e.g., hares, rabbits, rats, mice, voles, squirrels.
3. Insectivora, e.g., mole, hedgehog, shrew.
4. Carnivora, e.g., dog, fox, polecat, stoat, weasel, badger.

N.B.—Candidates who are in possession of Laboratory Notes are required to bring them to the Oral Examination in this subject.

9.—VETERINARY SCIENCE AND HYGIENE.

1. Elementary anatomy and physiology of the horse, ox, sheep, and pig, and their relation to unsoundness and disease.

2. The general principles of breeding—including the physiology of reproduction, the laws of heredity, the periods of gestation, and the signs of pregnancy in the mare, cow, ewe, and sow.

3. Dentition as a means of determining the age of horses, cattle, sheep, and swine.

4. The management of farm stock in health and disease.

N.B.—Candidates who are in possession of Laboratory Notes are required to bring them to the Oral Examination in this subject.

EXAMINATION PAPERS OF PAST YEARS.

Copies of papers set at past Examinations in AGRICULTURE, so far as available, may be had on application. Price 1/- per set.

N.D.A. Papers available are those for April 1948 and July 1948.

Stamps will NOT be accepted in payment for set of Examination papers.

WINNERS OF DIPLOMA IN 1948

EDINBURGH EXAMINATION.

- EDWARD JAMES DAN ALBONE, University College of Nottingham.
JOHN COLIN BOWERMAN, Royal Agricultural College.
GEORGE BURMAN, West of Scotland Agricultural College.
WILLIAM RAYMOND B. CARTER, University College of Nottingham.
JAMES CATTELL, Edinburgh University and Edinburgh and East of Scotland Agricultural College.
ROBERT LESLIE CATTRALL, Harper Adams Agricultural College.
JAMES WATSON CHAPMAN, Glasgow University and West of Scotland Agricultural College.
ALEXANDER WILLIAM CLARK, Bell Baxter.
ROSEMARY ANN HEATH COLVILLE, East of Scotland Agricultural College.
WILLIAM HARRY CRAGG, University College of Nottingham.
DAVID GORDON CRIGHTON, West of Scotland Agricultural College.
NORMAN BRIAN DAVIS, Harper Adams Agricultural College.
JOHN OWEN DAY, University College of Nottingham.
EDWARD DEXTER, University College of Nottingham.
KEITH DEXTER, University College of Nottingham.
HENRY TOM DIMOND, Seale-Hayne Agricultural College.
THOMAS ALISON DYKES, Edinburgh University and Edinburgh and East of Scotland Agricultural College.
NORMAN VICTOR ELCOCK, Harper Adams Agricultural College.
DAVID ALEXANDER FAYERS, University College of Nottingham.
A. D. GILES, Harper Adams Agricultural College.
FRANCIS RINDER GLENNIE, Seale-Hayne Agricultural College.
KENNETH JOHNSON, West of Scotland Agricultural College.
JAMES KERR, West of Scotland Agricultural College.
B. W. KEYS-STATHAM, Harper Adams Agricultural College.
PETER NEIL LEITCH, West of Scotland Agricultural College.
ROBERT FRANCIS LORD, Harper Adams Agricultural College.
JAMES EDMOND MACFARLANE, West of Scotland Agricultural College.
DONALD MACLEAN, West of Scotland Agricultural College.
MARION JUNE JOHNSTON MAIN, West of Scotland Agricultural College.
JAMES MORTON, West of Scotland Agricultural College.
MATTHEW SPENCER MUIR, Glasgow University and West of Scotland Agricultural College.
MARGARET MACNEE JOHNSTON NICHOL, East of Scotland Agricultural College.
VICTOR PAPPS, University of Reading.
ELIZABETH ARMORER PATTERSON, West of Scotland Agricultural College.
BERNARD HUBERT RICHMOND, University of Reading.
ALFRED VICTOR SAMBROOK, Harper Adams Agricultural College.
CHARLES CLIFFORD SEPHTON, East of Scotland Agricultural College.
JOHN STANLEY SHUTTLETON, West of Scotland Agricultural College.
GEORGE SIMPSON, West of Scotland Agricultural College.
ALEC JOHN SPALDING, West of Scotland Agricultural College.
ROBERT WILLIAM SERVICE SWAN, West of Scotland Agricultural College.
ROBERT BELLWOOD TATAM, University College of Nottingham.
DONALD SCOTT THOMSON, Glasgow University and West of Scotland Agricultural College.

LEEDS EXAMINATION.

- ALLAN M'CULLOCH AINSLEY, Essex Institute of Agriculture.
 JACK ARTHUR ALEXANDER, Harper Adams Agricultural College.
 GEORGE WILLIAM BATTERSBY, University College of Nottingham.
 LAWRENCE REGINALD BEDFORD, University College of Nottingham.
 JAMES STUART BEEVER, University College of Nottingham.
 WILLIAM EDWIN BERRYMAN, Seale-Hayne Agricultural College.
 WILLIAM HOWARD BOOTH, Edinburgh and East of Scotland Agricultural College.
 KENNETH ALAN BRADLEY, Royal Agricultural College.
 ROGER WILLIAM BRIMACOMBE, Seale-Hayne Agricultural College.
 VICTOR EDMUND MAUDE BURKE, Seale-Hayne Agricultural College.
 ALEC WILLIAM ARTHUR BURT, University of Reading.
 ANTONY PAUL LACON CASLING, University of Nottingham.
 WALTER JAMES CLARK, Royal Agricultural College.
 GEOFFREY FRANK CRASKE, Harper Adams Agricultural College.
 GEOFFREY GORDON CURTIS, Seale-Hayne Agricultural College.
 JOHN ALEC ERNEST DANIFELLS, Royal Agricultural College.
 MICHAEL DARWOOD, Harper Adams Agricultural College.
 BRIAN HUGH DELF, Seale-Hayne Agricultural College.
 MICHAEL THOMAS DEXTER, Royal Agricultural College.
 NORMAN WILLIAM DILKE, Harper Adams Agricultural College.
 BRYANT JOHN DIXON, University College of Nottingham.
 RODERICK HENRY DOBLE, Seale-Hayne Agricultural College.
 DAVID ROBERT MILES DOBSON, University College of Nottingham.
 WILLIAM HEDLEY ADAMSON DODDS, Essex Institute of Agriculture.
 MAURICE FRANK DONOGHUE, Harper Adams Agricultural College.
 KEITH DUNCAN, Harper Adams Agricultural College.
 HILEY JAMES EDWARDS, Seale-Hayne Agricultural College.
 STEPHEN PHILIP WADDINGTON ELDRIDGE, Seale-Hayne Agricultural College.
 FREDERICK ERNEST ELLIOTT, Essex Institute of Agriculture.
 BASIL ALAN EYLES, Harper Adams Agricultural College.
 JOHN ROSSALL FARNWORTH, Seale-Hayne Agricultural College.
 HENRY RUDSTON FELL, Royal Agricultural College.
 ISAAC EDWARD FORD, Harper Adams Agricultural College.
 JOHN HENRY GARDENER, University of Reading.
 PHILIP ANTHONY GIPPS, Seale-Hayne Agricultural College.
 LLEWELYN GRIFFITH-JONES, Harper Adams Agricultural College.
 REGINALD GUEST, Seale-Hayne Agricultural College.
 WILLIAM JAMES ERNEST HAINES, University College of Nottingham.
 STUART DINSDALE HALLAM, Seale-Hayne Agricultural College.
 PATRICIA J. HARRIS, Seale-Hayne Agricultural College.
 ANTONY EDWARD HAYWARD, Harper Adams Agricultural College.
 B. H. HITCHCOCK, Wye College.
 JOHN PETER HOUGH, Harper Adams Agricultural College.
 RICHARD JACKSON, Wye College.
 PHILIP JOHN JAMES, Seale-Hayne Agricultural College.
 RICHARD GEORGE JOHNSTON, Edinburgh and East of Scotland Agricultural College.
 DAVID LLOYD JONES, Harper Adams Agricultural College.
 FRANCIS DALRYMPLE KAYE, Harper Adams Agricultural College.
 BRIAN KEEN-SMITH, Seale-Hayne Agricultural College.
 ALBERT EDWARD KENNARD, Harper Adams Agricultural College.

- ANDREW HADDEN LAING, Edinburgh and East of Scotland Agricultural College.
- PETER WILLIAM LAMBERT, University College of Nottingham.
- MICHAEL DAVID LANCASTER, Seale-Hayne Agricultural College.
- JOHN HUMPHREY HARVEY LANGDON, Seale-Hayne Agricultural College.
- DENNIS JOHN LANGFORD, University of Reading.
- ANTHONY LESTER-CARD, Seale-Hayne Agricultural College.
- PETER HENRY LILLYWHITE, Royal Agricultural College.
- ALLAN CRAIG LITTLE, Royal Agricultural College.
- JOHN THURSTON LUMLEY, Seale-Hayne Agricultural College.
- ALEX. THOMAS SYMINGTON MACAULEY, Wye College.
- IAN CAMPBELL M'WILLIAM, Seale-Hayne Agricultural College.
- JAMES MICHAEL BUSSEY MILLER, Harper Adams Agricultural College.
- BENNET WILLIAM POTIER MILLIGAN, Royal Agricultural College.
- KENNETH GORDON MITCHELL, University of Reading.
- TREVOR WILLIAM NICOL, Royal Agricultural College.
- DERRICK HAZLITT OGDEN, Royal Agricultural College.
- GEORGE BRIAN PARKER, University College of Nottingham.
- ERIC JAMES PARTRIDGE, Seale-Hayne Agricultural College.
- KEITH REGINALD PLANT, University College of Nottingham.
- JOHN GILBERT POWLING, Essex Institute of Agriculture.
- MICHAEL NOEL PURCELL, University of Leeds.
- THOMAS BENSON RAVENSCROFT, Royal Agricultural College.
- THOMAS ALFRED RALLS, Harper Adams Agricultural College.
- JOYCE HELEN RANDLE, Essex Institute of Agriculture.
- LESLIE JOHN RANDLE, Essex Institute of Agriculture.
- JAMES RIDER, University of Reading.
- GILBERT MUIR ROBERTSON, Glasgow University and West of Scotland Agricultural College.
- RICHARD MICHAEL JAMES SAINSBURY, Harper Adams Agricultural College.
- SERGIO MANUEL SAURI, Harper Adams Agricultural College.
- IAN GEORGE SHEILS SELLERS, Royal Agricultural College.
- LAURENCE GEOFFREY SELLWOOD, Seale-Hayne Agricultural College.
- HARRY NORMAN SHEPHEARD-WALWYN, Edinburgh University and Edinburgh and East of Scotland Agricultural College.
- IAIN FERGUS SINCLAIR, University College of Nottingham.
- MICHAEL WILLIAM SLATER, Harper Adams Agricultural College.
- EDWARD JOHN SMITH, Royal Agricultural College.
- EDWARD CLAUDE PARKER SPURGE, Royal Agricultural College.
- DAVID CECIL JOHN STONE, Seale-Hayne Agricultural College.
- HUGH PEACOCK THOMSON, University College of Nottingham.
- PETER GRAHAM THROSSELL, Royal Agricultural College.
- MARGARET TIFFANY, Harper Adams Agricultural College.
- UNA PENELOPE TRELEASE, Seale-Hayne Agricultural College.
- JOHN FRASER UREN, Seale-Hayne Agricultural College.
- SHEILAGH ROSEMARY WALKER, Seale-Hayne Agricultural College.
- RAYMOND MARTIN WATSON, University College of Nottingham.
- THOMAS ROBERT WATTS, University College of Nottingham.
- ROBERT SAMUEL WHITE, Harper Adams Agricultural College.
- CHRISTOPHER JOHN WILLY, Seale-Hayne Agricultural College.

NATIONAL DIPLOMA IN DAIRYING

This Examination, instituted in 1897, is conducted by "The National Dairy Examination Board," appointed jointly by the Royal Agricultural Society of England, the Royal Highland and Agricultural Society of Scotland, and the British Dairy Farmers' Association.

FUTURE N.D.D. EXAMINATIONS

The 1949 N.D.D. Examination will provide the last opportunity to sit for the entire examination or for the first part thereof. In 1950 the N.D.D. Examination will be confined to candidates appearing for a second part, or reappearing for any one, two, or three subjects, and in 1951 only to candidates reappearing for any one subject.

The N.D.D. is being replaced by the National Diploma in Dairy Husbandry and National Diploma in Dairy Technology of which Regulations and Syllabus will be forwarded on request.

REGULATIONS FOR EXAMINATION IN THE SCIENCE AND PRACTICE OF DAIRYING

1. The Societies may hold annually in England and Scotland, under the management of the National Dairy Examination Board appointed by them, one or more examinations for the National Diploma in the Science and Practice of Dairying, on dates and at places from time to time appointed and duly announced; the Diploma to be distinguished shortly by the letters "N.D.D."

2. Forms of entry for the Examination in England may be obtained from "The Secretary, Royal Agricultural Society of England, 16 Bedford Square, London, W.C.1." and must be returned to him duly filled up, with the entry fee, on or before Tuesday, 26th July 1949.

3. Forms of entry for the Examination in Scotland may be obtained from "The Secretary, Royal Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, Edinburgh 12," and must be returned to him duly filled up, with the entry fee, on or before Tuesday, 2nd August 1949.

4. Any candidate may enter for the Examination either in England or Scotland, but not in both, and a candidate who has once taken part in an Examination in England cannot enter for an Examination in Scotland, or *vice versa*. *An exception may be made in favour of a candidate reappearing under Regulation 10 (2) provided special application is made at the time of entry.*

5. As a preliminary to the acceptance of any application for permission to enter for the Examination, a candidate must produce :—

(1) from the Head of an approved Dairy Training College or Institute :

- (a) a statement that he or she is in possession of the General School Certificate (England), the Day School Certificate Higher (Scotland), or the School Certificate of the Central Welsh Board ; or a statement that his or her general education is of an equivalent standard ;
- (b) a certificate testifying that he or she has satisfactorily completed courses in (i) soils, crops, rotations, cultivations, manuring of crops (other than pastures), and plant physiology ; (ii) elementary chemistry, physics and mechanics, *and*
- (c) that he or she has also attended a Diploma or Degree course in the subjects of the Examination covering at least two academic years at an approved Dairy Training College or Institute, and has satisfied the authorities of the College or Institute of his or her fitness for admission to the Examination. *This period shall include six months' instruction (consisting of not more than two periods) in practical dairy work.*

(d) a certificate of proficiency in soft cheese-making.

(2) a certificate of proficiency in the milking of cows, signed by a dairy farmer, and evidence that he or she has spent at least six months in not more than two periods on an approved dairy farm and taken part in the work, both in the dairy and on the land. *This period must not run concurrently with the six months' practical training referred to in sub-section 1 (c).*

A Dairy Farm to be approved must have not fewer than fifteen cows in milk.

6. A candidate who has already taken a Degree in Agriculture of a British University, or a Diploma in Agriculture recognised by the National Dairy Examination Board, will be allowed to enter for the National Diploma in Dairying Examination after one year's subsequent training at an approved Dairy Training College or Institute, providing that such course includes at least six months' training in practical dairy work, and that he or she has spent at least six months on an approved dairy farm, and taken part in the work both in the dairy and on the land.

7. In the Examination a candidate will be required to satisfy the Examiners by means of written papers, practical work, and *visu voce*, that he or she has :—

- (1) A general knowledge of the management of a dairy farm, including the rearing and feeding of dairy stock, the candidate being required to satisfy the Examiners that he or she has had a thorough training and practical experience in all the details of dairy work as pursued on a farm.
- (2) A thorough acquaintance with the practical details of the management of a dairy, and the manufacture of butter and cheese, together with a working knowledge of the scientific principles involved in these operations.
- (3) A general knowledge of dairy book-keeping.

- (4) **Practical skill in dairying, to be tested by the making of butter and cheese.**

NOTE.—A candidate must be prepared to make any one of three varieties of Hard Pressed Cheese, two of which must be Cheddar and Cheshire, these three to be specified on his application form, the Examiner in Cheese-making having the option of saying, during the Examination, which a candidate shall make.

8. **Candidates will have the option of :—**

- (a) Taking the whole Examination at one time ; or
(b) Taking the Examination in two parts.

A candidate taking the Examination in two parts must take the following subjects at the first sitting: DAIRY HUSBANDRY, MILK AND MILK PLANT, CREAM AND BUTTER, CHEESE AND CHEESE PRODUCTS, PRACTICAL CHEESE-MAKING AND BUTTER-MAKING; the remaining three Papers, DAIRY CHEMISTRY, DAIRY MICROBIOLOGY, and DAIRY BOOK-KEEPING, at the Examination in the following year.

9. **The maximum marks obtainable and the marks required for a pass in each subject are :—**

WRITTEN AND ORAL EXAMINATION—			Max.	Pass.
Dairy Husbandry	. . . (3 hours' paper)		150	90
Milk and Milk Plant	. . . (2 hours' paper)		100	60
Cream and Butter	. . . " "		100	60
Cheese and Cheese Products	. . . " "		100	60
Dairy Chemistry	. . . " "		100	60
Dairy Microbiology	. . . " "		100	60
Dairy Book-keeping	. . . (3 hours' paper)		100	50
PRACTICAL EXAMINATION—CHEESE-MAKING—				
(a) One of the three Hard Pressed Cheeses specified by the candidate on his form of application	. . . . .		200	150
(b) Blue-veined	. . . . .		100	75
BUTTER-MAKING	. . . . .		200	150
			1250	815

Honours will be awarded to candidates obtaining an aggregate of 80 per cent (1000) of the maximum marks (1250) in the Examination, provided that they also obtain at least 80 per cent (360) of the maximum marks (450) in the Dairy Husbandry, Milk and Milk Plant, Cream and Butter, and Cheese and Cheese Products papers.

10. **A candidate taking the whole Examination at one time :—**

- (1) who fails in any part of the practical examination shall fail in the whole examination.
(2) who fails in four or more subjects of the written examination shall fail in the whole examination.
(3) who, having passed in the practical examination, fails in not more than three subjects of the written examination may, at the discretion of the Board, appear for those subjects in the following year. A candidate so reappearing and again failing in one or more subjects shall fail in the whole examination.

11. A candidate taking the Examination in two parts, and failing in a single subject in the first part of the Examination, may, at the discretion of the Board, appear for that subject along with the second part; or, in the case of a single subject of the second part, in the following year.

Failure in more than one subject will be regarded as failure in that part of the Examination. Failure in any part of the Practical Examination will entail complete failure.

12. In all cases of failure, either in the whole Examination or in part thereof, the Board will require evidence of further instruction before a candidate is again admitted to the Examination.

13. The entrance fees will be as follows :—

For the whole Examination taken at one time	. £3	3	0
For the Examination taken in two parts :			
First part	. . . . .	3	3
Second part	. . . . .	1	1
For reappearance, 10s. 6d. each subject.			

14. The Board reserve the right to postpone, to abandon, and to modify an Examination, and also to decline to admit any particular candidate to the Examination.

DATES OF EXAMINATIONS.

SCOTLAND.—At the Dairy School for Scotland, Auchincruive, Ayr.
Written—TUESDAY, WEDNESDAY, THURSDAY, and FRIDAY, 6th, 7th, 8th, and 9th SEPTEMBER 1949. *Oral and Practical*—MONDAY, 19th SEPTEMBER 1949, and following days. Last date for receiving Applications, TUESDAY, 2nd AUGUST 1949.

ENGLAND.—At the University, Reading—TUESDAY, 6th SEPTEMBER 1949, and following days. Last date for receiving Applications, TUESDAY, 26th JULY 1949.

SYLLABUS OF SUBJECTS OF EXAMINATION

I.—DAIRY HUSBANDRY.

Buildings of the dairy farm; structural features, sanitation, and water supply.

Selection, stocking, and equipment of typical dairy farms; organisation of the dairy farm.

The utilisation of the crops of the dairy farm.

Pastures and pasture management; dried grass, silage.

Foods used on the dairy farm; characteristics and relative value.

Live stock of the dairy farm; essential conformation features of the dairy cow and dairy bull; British dairy breeds; milk recording.

Breeding of dairy stock, principles and practice ; selection, care, and management of the sire ; calf rearing ; raising of dairy heifers.

Management of dairy herds ; self-contained herds ; attested herds.

Feeding of dairy cows for milk production ; feeding standards ; construction and use of rations.

Common ailments and diseases of dairy stock : milk fever, bloat, cow pox, mastitis, contagious abortion, tuberculosis, John's disease, sterility, scour, hoose, notifiable animal diseases.

Hygienic milk production ; hand and machine milking ; cleaning and care of milking machines and utensils used in milk production ; milk coolers and farm sterilising equipment.

Pigs on the dairy farm ; suitable breeds for bacon and for pork production ; housing accommodation ; breeding, feeding, and management of pigs ; fattening of pigs ; pig recording ; common ailments and diseases of pigs.

II.—MILK AND MILK PLANT.

Utilisation of milk and milk products in Great Britain ; sources of supply ; the principles of organised marketing. Milk contracts.

Properties of milk.

Variations in the composition of milk ; legal minimum standards for milk ; statutory rules and orders relating to milk and milk products.

Sources of taints and contamination in milk. Abnormal milk. Flavour in milk and the contributing factors.

Grades of milk.

Food value of milk. Hard and soft curd milk.

Transportation of milk ; milk churns ; road and rail tanks ; processing of milk at milk depots ; sampling and testing of milk ; effects of heat on milk ; essentials for efficient pasteurisation ; progressive stages in milk treatment at milk plants ; weighing ; filtering ; clarifying, pumping, pasteurising, cooling, bottling, and capping ; refrigeration ; cold storage.

Disposal of wastes from milk plants.

Distribution of milk.

Special treatment of milk ; homogenisation, irradiation, stassanisation, commercial sterilisation, high temperature, short time heat treatment.

Fermented milk preparations, Yoghurt, Kefir, and cultured butter milk.

Elementary principles of condensing and drying of milk.

III.—CREAM AND BUTTER.

Cream.—Production and consumption of cream in Great Britain. **Utilisation of cream ; grades of cream, regulations for the sale of cream ; different methods of obtaining cream from milk.**

Operation and management of cream separators, hand and power.

Efficiency of separation ; cleaning and sterilisation of separators.

Testing of cream.

Factors influencing the flavour, physical properties, and keeping qualities of cream ; homogenisation of cream.

Pasteurisation of cream; cooling and storage; marketing of cream.

Cream preparations; whipped cream, clotted cream, sterilised cream, reconstituted cream.

Cream appliances, homogenisers, cream sterilising plant, pasteurisers, cream coolers.

Ice Cream.—Types of plant used. Materials used in, and preparation of mixes. Pasteurising, ripening, freezing, and hardening.

Butter.—Production and consumption of butter in Great Britain; sources of imports.

Food value of butter; regulations governing the production and sale of butter.

Selection and grading of cream for butter-making.

Treatment of cream prior to churning; heating, cooling; preparation and use of starters.

Churning of cream; factors affecting churning and loss of butter fat.

Washing of butter; purity of wash water.

Methods of working and salting of butter; quality of salt.

Packing of butter and treatment of liners and butter boxes; storage of butter; refrigeration in factories and in transport.

Grading and judging butter. National Mark butter. Common defects in butter and their causes.

Special systems of butter-making; sweet cream butter; whole milk butter; neutralised cream butter; whey butter.

Utilisation of by-products of butter-making; separated milk and butter milk. Casein.

Butter-making equipment; separators; pasteurising plant, cream coolers, cream pumps, starter-preparing apparatus, cream ripeners, churns and butter workers. Butter packers, moulders and blenders, butter cutting, and wrapping machines.

IV.—CHEESE AND CHEESE PRODUCTS.

Production and consumption of cheese in Great Britain; sources of imports.

Food values of cheese.

Principles of cheese-making; varieties of cheese.

Hard-pressed cheese. Agents used in manufacturing process; starter, colour, rennet, salt.

Milk for cheese-making; care and management.

Detailed knowledge of the manufacture of Cheddar and Cheshire, and one of the following: Derby, Dunlop, Leicester, Gloucester, or Lancashire.

Manufacture of cheese from pasteurised milk.

Small hard-pressed cheeses: Caerphilly, Smallholder, &c.

Difficulties experienced in the manufacturing process; causes of fast and slow working, gas formation, ropy and slimy whey.

Ripening and storage of cheese.

Grading and judging of cheese; National Mark standards.

Marketing of cheese.

Defects in the flavour, body, and texture, and in the colour of mature cheese.

Manufacture of Stilton and Wensleydale cheeses, blue-veined and white.

Soft cheese-making.

Cream cheeses. Single and double cream cheeses.

Cheese products. Manufacture of processed cheese, and cheese spreads.

Usual cheese factory equipment and arrangement; cheese vats, curd knives, curd agitator, cheese press, curd mill; cheese hoops, cheese turners, paraffining apparatus, pasteurising equipment, air conditioning plant.

Utilisation of whey.

V.—DAIRY CHEMISTRY.

The principal constituents of foodstuffs and the functions they fulfil. Assimilation and digestion. Vitamins.

The nature and composition of milk, colostrum, butter, cheese, cream, separated milk, butter milk, whey, casein, and lactose.

Drying and condensation of milk and milk products.

Variation in composition of milk.

Milk souring, rennet coagulation, preparation and ripening of cheese, storage of butter, salt for dairy purposes.

Metals and their influence on milk and milk products. Taints.

Effects of heat on milk. Abnormal milk.

The sampling and analysis of milk and milk products. Freezing-point test for milk.

Commercial routine analysis of foodstuffs.

Chemical aspects of water supply.

Dairy detergents and disinfectants.

N.B.—Candidates are required to bring to the Oral Examination in this subject their Laboratory notebooks certified by their teachers as being the record of their Laboratory work carried out during the course.

VI.—DAIRY MICROBIOLOGY.

GENERAL.—The bacteria, yeasts, and moulds which commonly occur in milk and dairy products; their form, classification (in the case of the bacteria—Topley and Wilson's), growth, and reproduction. Factors which control rate of growth. Fermentations of importance in dairying; causal micro-organisms and conditions which influence activity.

MILK.—Microbiology of milk production; sources of contamination, their relative importance and organisms derived from them. Normal changes produced by micro-organisms in milk. Abnormal changes; ropiness, premature curdling, gas formation, bitter, yeasty and malty flavours and flavour of roots and feeding-stuffs; causal organisms and methods of prevention. Effects of straining, centrifuging, cooling, heating, condensing, drying, and preservatives on the microflora of milk. Bacteriology of pasteurised and sterilised milk; influence of quality of raw milk. Standards for graded milks.

MILK PRODUCTS.—Starters; their propagation and management. Ripening of cream; development of normal flavour. Microbiology of butter. Ripening of hard, soft, and blue-veined cheese; factors concerned and their control. Microbiology of condensed, dried, and fermented milks. Defects of dairy products, causal organisms and preventive measures; butter defects—rancidity, yeasty and cheesy flavours, coloured spots; cheese defects—gas formation, bitterness, slow acid development and excessive acidity, colour changes; defects of condensed milk—gas formation, “buttons,” coagulation.

DISEASES.—Diseases which may be conveyed by milk; sources of infection. Bacteriology of tuberculosis, contagious abortion, mastitis, and methods of detection. Immunity; vaccines. Disinfection.

WATER.—The importance of a pure water supply for the dairy and the herd. Bacteria commonly present in natural waters. Sources of contamination, the effect of pollution with sewage, water-borne disease.

LABORATORY WORK.—The microscope and its use. Staining (including Gram and Ziehl-Neelsen methods) and microscopic examination of micro-organisms. Methods of isolation and cultivation. Preparation of bile-salt broth, milk, milk agar, and Wilson's agar. Methods for the examination of milk; plate method, post-pasteurisation count, coliform test, Breed's method and the methylene blue reduction, fermentation, acidity and catalase tests. Methods for tracing sources of contamination and of milk faults. Detection of thermophilic, thermoduric, and pathogenic organisms in milk. Examination of water supplies.

N.B.—Candidates are required to bring to the Oral Examination in this subject their Laboratory notebooks certified by their teachers as being the record of their Laboratory work carried out during the course.

VII.—DAIRY BOOK-KEEPING.

The interpretation of farm and dairy factory accounts and their use in farm and factory management.

General principles of double-entry book-keeping. Use of day-book, journal, ledger, cash-book, and petty-cash book. Preparation of profit and loss account, capital account, and balance-sheet. Adjustments necessary for the owner-occupier.

Analysis cash-book.

Valuations.—Bases of valuations for accounting purposes on the farm and in the dairy factory. Dates for stock-taking. Stock books and quantitative records.

Methods of accounting suitable for dairy farms with varying systems of milk disposal.

Opening and operating a bank account. Cheques, deposits, and overdrafts.

General principle of the assessment of the farmer to income tax.

EXAMINATION PAPERS OF PAST YEARS.

Copies of papers set at past Examinations in DAIRYING may be had on application. Price 1/- per set.

Papers available are those for the years 1946, 1947, and 1948.

Stamps will NOT be accepted in payment for set of Examination Papers.

WINNERS OF DIPLOMA IN 1948

SCOTTISH CENTRE.

(All the candidates at the Scottish Centre had been students at the Dairy School for Scotland, Auchincruive, Ayr.)

KENNETH GEORGE ALDOUS, Rectory Cottage, Maisemore, near Gloucester.

MARGARET KERR BOWIE, Broom Farm, Stewarton, Ayrshire.

JAMES LAING BRANDER, 3 Scott Crescent, Galashiels, Selkirkshire.

GEORGE BURMAN, 1215 Royston Road, Provanmill, Glasgow.

ARCHIBALD GYLEN CAMPBELL, c/o 137 St Vincent Street, Glasgow, C.2.

FLORA LIVINGSTONE CAMPBELL, Airds, Ardfarn, Lochgilphead, Argyll.

ALEXANDER CLARK, Auchlea, Kingswells, Aberdeenshire.

MORAG SCOTT DICKSON, 8 Wellview Drive, Motherwell.

JEAN SANDILANDS DUNCAN, Auchinlee, Croy, by Glasgow.

MARGARET OGILVIE DUNCAN, 2 Conningsby Place, Alloa.

MAY AGNES EDGAR, Ballinnie, Moniaivo, Dumfriesshire.

ELIZABETH LOUDOUN FLINT, 5 Greenhead Road, Bearsden, Dunbartonshire.

IAN FRASER, "Annie'slea," Bonnybridge, Stirlingshire.

AILSA MARGARET GALBREATH, Invermay, Skelmorlie, Ayrshire.

JUNE ANNETTE GAUDIE, Ardlui, Inveresk, Midlothian.

SHEILA M'COMBIE GRANT, The Bungalow, Aldroughty, Elgin.

NAN STRACHAN HAMILTON, Tullochgribban, Grantown-on-Spey.

ELIZABETH SUSAN HARPER, 26 Belford Avenue, Edinburgh 4.

AGNES ELIZABETH HIRONS, 14 Oxford Road, Cunnor, Oxford.

KENNETH JOHNSON, 267 Croftmill Road, Glasgow, S.4.

DONALD BLACK KING, Gosford, Elmwood Avenue, Newton Mearns, Renfrowshire.

SUSAN ADDISON IRVINE KIRK, 471 Queensferry Road, Barnton, Midlothian.

PETER NEIL LEITCH, 40 Stamperland Hill, Clarkston, Glasgow.

DONALD JOSEPH CHARLES LOXTON, "Virginia," Stoke Trister, Wincanton.

GEOFFREY ARTHUR JAMES LOXTON, "Virginia," Stoke Trister, Wincanton.

DONALDA CATHERINE MACFARLANE, 28 Selborne Road, Glasgow, W.3.

JAMES EDMOND MACFARLANE, 308 Shawbridge Street, Glasgow, S.3.
 MRS BARBARA MACGREGOR, The Willows, Sandyfield, Sedgley, Staffs.
 JOHN THOMSON MILLER, Old Place, Kilsyth, Stirlingshire.
 IAN WATSON MITCHELL, Spittal Farm, Killearn, Stirlingshire.
 AGNES WHITELAW MOORE, 33 Carolside Avenue, Clarkston, Glasgow.
 JAMES SUTHERLAND MURRAY, 29 John Street, Helensburgh, Dunbartonshire.
 ELIZABETH OLIPHANT NAISMITH, 7 Chalmers Crescent, Edinburgh 12.
 STUART ANDREWS CUNNINGHAM OLIVER, Fenton, 6 Crown Circus, Inverness.
 MICHAEL PAPANEOPHYTOU, Stasinou Street, No. 4 Nicosia, Cyprus.
 JEAN PARKER, 3 Front Street, Stanhope, Co. Durham.
 BETTY DOROTHY PATERSON, 21 Brunstane Road, Joppa, Edinburgh.
 ISABELLA COCHRANE PROUD, Nithsdale Poultry Farm, Lonzie, Lanark.
 BARBARA PATON RIGG, Dalerue, Largo Road, Leven, Fife.
 GILBERT MUIR ROBERTSON, 51 Buchanan Drive, Rutherglen, Glasgow.
 GEORGE SIMPSON, 40 Greenfield Road, Glasgow, E.2.
 ALEC JOHN SPALDING, 24 Thorn Drive, Bearsden, Glasgow.
 PATRICK ARTHUR SPURGEON, Mill Farm, Brooke, Norwich.
 MARION PRUDENCE STEWART, 5 Beechwood Terrace, Glasgow, E.2.
 JEAN MONTEITH RITCHIE TENNANT, Hillhouse, Sandilands, Lanark.
 JOSEPH THOMAS, Milton Dairy, Kirkeudbright.
 JAMES WALKER-LOVE, Greenbank, Clark Street, Airdrie.

READING CENTRE.

JAMES STANLEY BEAR, Seale-Hayne Agricultural College, Newton Abbot, Devon.
 JOAN HOPE BEST, 39 Danford Lane, Solihull, Warwickshire.
 ARTHUR SAMUEL BOWDEN, 1 Clifton House, High Street, Combe Martin, North Devon.
 NANCY RUTH BRINDLE, 14 Galbraith Road, Didsbury, Manchester 20.
 ANNE ELIZABETH CAUNT, 42 High Street, Kington, Hereford.
 ANNETTE MARY CHAPMAN, 76 Harcourt Road, Redland, Bristol 6.
 SHEILA KATHLEEN CLARK, Westfield, Wingfield Road, Trowbridge, Wilts.
 BARBARA MYRNE COULMAN, 12 Devon Rise, East Finchley, N.2.
 JOAN VIVIENNE CROSSMAN, Hill Farm, East Horrington, near Wells, Somerset.
 MENNA DAVIES, Waunlwyd, Llangeller, Llandyssul, Cards.
 ROBERT GUY DANOIS DAVIS, 15 Christchurch Gardens, Reading.
 RUTH MARY DUNNING, Vane Court, Biddenden, Kent.
 MARGARET FRANCES DYER, 8 Avondale Mount, Shipley, Yorks.
 MARJORIE HELEN FISH, 3 Telford Court, Streatham Hill, S.W.2.
 BARBARA MARY FREEMAN, Belmont, Uffington, near Faringdon, Berks.
 MARION ELIZABETH GALL, Portway House Hotel, Frome, Somerset.
 SHEILA EDWINA GREENWOOD, 65 Whitby Road, Bradford, Yorks.
 AUDREY VALERIE HILL, Packwood Lodge, Four Ashes Road, Dorridge, Warwickshire.

JOY MARY HOLMES, 59 Donnington Road, Reading, Berks.

HELEN PRISCILLA LONDON, Mill-Field, Galleywood, Chelmsford, Essex.

MARY ELIZABETH NICHOLLS, Hall Farm, Leinthall Earles, Kingsland, Leominster.

BETTY EDGE OWEN, 18 Holmfield Burgage, Buxton, Derbyshire.

ANNE HARRIOT POORE, Grove House, Portlaw, Co. Waterford, Eire.

JAMES DONALD RIDGWAY, 108 Bramhall Lane, Davenport, Stockport.

CYNTHIA JEAN RILEY, Burton Latimer Hall, near Kettering, Northants.

MAXINE MARGARET ROTHWELL, 1 Dalmeny Avenue, Tufnell Park, N.7.

BARBARA SAWEARD, Hilcot, South Elkington, Louth, Lincs.

JANET SARAH SHEPHERD, 13 Chaucer Terrace, Grantham, Lincs.

PEGGY BERYL SHEPPARD, 1 Priory Road, Keynsham, near Bristol.

BRENDA MARGARET STANBRIDGE, Duck End Farm, Stovington, Bedford.

MARY GREENLEES STEVEN, Squerryes Home Farm, Westerham, Kent.

ANDREW M'CRONE STIRLING, 135 Milngavie Road, Bearsden, Glasgow.

DIANA CLAIR STOBART, Studley College, Studley, Warwickshire.

KENNETH WILLIAM WARD, 156 Perry Road, Sherwood, Nottingham.

PAMELA ESTCOURT WATKINS, Penmao, St Feock, Truro, Cornwall.

HAZEL LILY WEBB, 14 Rymond Road, Ward End, Birmingham 8.

JOAN MAISIE UPTON WOOLER, Greenaway, Bolling Road, Ilkley, Yorks.

ALFRED GEORGE WYMAN, 105 Huntingtower Road, Grantham, Lincs.

NATIONAL DAIRY EXAMINATION BOARD

REGULATIONS FOR EXAMINATIONS IN 1949 IN DAIRY HUSBANDRY

1. The Societies may hold annually in England and Scotland, under the management of the National Dairy Examination Board appointed by them, Examinations for the National Diploma in Dairy Husbandry on dates and at places from time to time appointed and duly announced; the Diploma to be distinguished shortly by the letters "N.D.D.H."

2. Forms of entry for the Examination in England may be obtained from The Secretary, Royal Agricultural Society of England, 16 Bedford Square, London, W.C.1, and when completed must be returned to him, with the entry fee, on or before the specified date.

3. Forms of entry for the Examination in Scotland may be obtained from The Secretary, The Royal Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, Edinburgh 12, and when completed must be returned to him, with the entry fee, on or before the specified date.

4. Any candidate may enter for an Examination either in England or Scotland, but not in both in the same year.

5. As a preliminary to the acceptance of any application for permission to enter for an Examination, a candidate must produce—

(1) from the Head of an approved Dairy Training College or Institute—

- (a) A statement that the candidate is in possession of the General School Certificate (England), the Day School Certificate Higher (Scotland), or the School Certificate of the Central Welsh Board; or, in exceptional circumstances, a statement that the general education of the candidate is of an equivalent standard.
- (b) Evidence of having attended a Diploma or Degree course in the subjects of the Examination covering at least two academic years (including practical instruction in dairy work, as stated below) at an Agricultural Department of a University, an Agricultural College or a Dairy College, and of having satisfied the authorities thereof as to fitness for admission to the Examination.
- (c) A certificate of proficiency in practical dairy work covering ten weeks' instruction in the handling of milk on the farm and the manufacture of farm butter and cheese.

- (2) A certificate of proficiency in the milking of cows, both by hand and machine, signed by a dairy farmer, and evidence of having spent a complete year, in not more than two periods, and having taken part in the work both in the dairy and on the land, on a dairy farm in the British Isles recommended by the training institution * and approved by the Board.

* *(It is desirable that the approved dairy farm should have a herd mainly home-bred and milk-recorded, of not fewer than 15 cows, and be producing graded milk.)*

6. A candidate having already obtained the National Diploma in Dairy Technology shall be eligible to sit for the Examination in Dairy Husbandry provided he has attended the requisite course of instruction in the subjects of the Examination and has spent not less than six months on an approved dairy farm.

7. A candidate having obtained a Degree in Agriculture at a British University or a Diploma in Agriculture recognised by the National Dairy Examination Board shall be eligible to sit for the National Diploma in Dairy Husbandry Examination subject to the following conditions :—

- (a) that he has spent at least six months on an approved dairy farm ; and
- (b) has had one year's subsequent training in the subjects of the Examination at an approved institution.

8. Candidates desiring to enter for Examination under the provisions of Clauses 6 or 7 must produce evidence of having attended the courses of instruction and of having obtained the practical experience prescribed therein.

9. A candidate having obtained the National Diploma in Dairying (N.D.D.) shall be eligible to sit for the National Diploma in Dairy Husbandry Examination without taking a further course of instruction, but must produce evidence of having spent twelve months on an approved dairy farm.

10. The subjects of the Examination, the maximum marks obtainable, and the marks required for a pass in each subject are :—

WRITTEN AND ORAL EXAMINATIONS.

DAIRY HUSBANDRY—	Max.	Pass.
1. Dairy Farming (3 hours' paper)	150	90
2. Dairy Cattle—Breeding, Feeding, and Management (3 hours' paper)	150	90
3. Physics and Chemistry (2 hours' paper)	100	50
4. Economics and Accountancy (3 hours' paper)	100	50
5. Dairy Microbiology (2 hours' paper)	100	50
6. Animal Health (2 hours' paper)	100	50
	<hr/> 700	<hr/> 380

Oral Examinations may be held on a dairy farm.

An Honours Diploma will be awarded to candidates obtaining an aggregate of 75 per cent (525) of the maximum marks in the Examination, provided that candidates obtain at least 75 per cent (225) of the maximum marks in the Dairy Farming and Dairy Cattle papers.

11. A candidate who fails in more than two subjects shall fail in the whole Examination.

A candidate who fails in not more than two subjects may, at the discretion of the Board, reappear for these subjects in the following year. A candidate reappearing and failing in one or both subjects shall fail in the whole Examination.

12. The entrance fee shall be as follows :—

For the whole Examination—£5, 5s.

For reappearance—£1, 1s. each subject.

13. The Board reserves the right either to postpone or abandon or to modify an Examination as it thinks fit, and also to refuse admission to any candidate applying to take the Examination.

DATES OF EXAMINATIONS.

SCOTLAND.—At the Dairy School for Scotland, Auchincruive, Ayr.

Written—TUESDAY, WEDNESDAY, and THURSDAY, 6th, 7th, and 8th SEPTEMBER 1949. *Oral*—MONDAY, 19th SEPTEMBER 1949, and following days. Last date for receiving Applications, TUESDAY, 2nd AUGUST 1949.

ENGLAND.—At the University, Reading—TUESDAY, 6th SEPTEMBER 1949, and following days. Last date for receiving Applications, TUESDAY, 26th JULY 1949.

NATIONAL DIPLOMA IN DAIRY HUSBANDRY

SYLLABUS OF SUBJECTS OF EXAMINATION

I.—DAIRY FARMING.

Dairy farming in relation to general agriculture ; development and distribution ; types of dairy farms ; selection, stocking, and equipment of typical dairy farms ; labour and organisation.

Buildings suitable to different conditions ; general layout ; cow-sheds, yards, and milking sheds ; milking bails ; accommodation for bulls, calves and young stocks, and fodder ; water supply ; sanitation ; requirements for graded milk production ; barn and dairy equipment.

Crops for dairy farms ; pastures and ley management ; suitable seed mixtures and costs per acre ; selection of cereal, leguminous, root, and forage crops ; acreages required and suitable rotations ; general principles of tillage, manuring, and harvesting applicable to the chief crops ; silage crops and the making of silage ; approximate costs of production of the chief crops ; grass drying.

Cost of milk production ; records which should be kept as a guide to management.

Sale of milk by wholesale and retail ; legislation affecting milk production and sale ; circumstances on the farm which affect the yield and quality of milk ; graded milk production ; payment according to composition and premiums for graded milk ; cleaning and care of milking machines and other utensils.

Pigs in relation to dairying ; suitable breeds for bacon and for pork production ; housing accommodation ; breeding, feeding, and general management.

II.—DAIRY CATTLE—BREEDING, FEEDING, AND MANAGEMENT.

Important conformation points and features of the dairy cow ; indications and measurement of production ; history of milk recording ; British methods of milk recording and fat testing.

Breeds kept for milk production ; chief characteristics and suitability for different conditions ; types of dairy herds ; home-bred herds and their advantages ; flying herds.

Principles applied to the breeding of dairy stock ; hormones in relation to breeding ; pedigree and non-pedigree stock ; herd-books and grading-up ; defects in indiscriminate crossing ; use of milk and

butter-fat records in breeding ; registers of merit and advanced registers ; progeny testing and bull indexes ; artificial insemination and its place in live-stock improvement. Selection and management of bulls.

Feeding of dairy cows ; principles and practice of feeding for maintenance and production ; feeding standards ; mineral and vitamin requirements ; chief characteristics of home-grown and purchased foods ; essentials of a good ration ; rations for winter and summer on different types of farms ; approximate costs of different rations.

Calf-rearing ; different methods ; use of foods to replace milk ; rearing and feeding of bull calves ; rearing, feeding, and management of dairy heifers ; approximate cost of rearing.

Secretion of milk ; hormones in relation to milk secretion ; milking by hand and machine ; importance of good milking.

Herd management in general ; regulation of calvings for level and seasonal production ; records essential to good herd management.

III.—PHYSICS AND CHEMISTRY.

Volumes of containers ; specific gravity ; viscosity ; surface tension ; fluid pressure ; barometers ; syphons ; pumps ; levers ; pulleys ; elementary weighing machines ; heat ; expansion ; thermometry ; conduction ; convection ; radiation ; evaporation ; latent heat ; specific heat ; calorific value ; steam, production and utilisation ; safety devices ; emulsions and their properties ; scientific principles of milking machines ; principles of refrigeration.

Elements, compounds, mixtures ; acids, bases, salts ; acidity, alkalinity ; atmosphere ; hydrogen ; oxygen ; nitrogen ; carbon ; phosphorus ; sulphur ; water ; common metals and their compounds ; metals and alloys used in dairy equipment ; elementary chemistry of alcohols, aldehydes, sugars, acetic acid, butyric acid, lactic acid, glycerol, fat, protein.

Soils, formation and classification, chemical and physical properties ; fertility and improvement of soils ; manures and manuring ; feeding-stuffs and feeding standards ; composition and constituents of milk ; variation in the composition of milk ; sour milk ; cream ; butter ; separated milk ; cheese ; whey ; margarine ; dirt in milk ; legal regulations with regard to fertilisers, feeding-stuffs, milk, butter, cheese, margarine ; nutritive value of dairy products ; analysis ; British Standards Institution methods of sampling and analysis ; adulteration and its detection ; detergents, disinfectants ; water supply, water softening.

N.B.—Candidates are required to bring to the Oral Examination in this subject their laboratory notebooks certified by their teachers as being the record of their laboratory work carried out during the course.

IV.—ECONOMICS AND ACCOUNTANCY.

ECONOMICS.—The Factors of Production—land, labour, capital, and enterprise—and their rewards, rent, wages, interest, and profits. Wages and Trades Boards.

Large and small-scale enterprises.

Problems and methods of marketing. The function of middlemen. Marketing Boards.

Sources of economic and financial statistics. Problems of planning and price control.

ACCOUNTANCY.—*General Principles of Double-entry Book-keeping* : use of day book, journal, ledger, cash book, and petty cash book.

Preparation of profit and loss account, and balance sheet.

Valuations : Methods of stocktaking. Calculation of depreciation. General bases of valuations.

Income Tax : Preparation of returns—the P.A.Y.E. system for workers.

Cost Accounting : Outline of the general principles, and the chief types of records required.

V.—DAIRY MICROBIOLOGY.

GENERAL.—Form, growth, and reproduction of micro-organisms. The elements of classification. Introduction to methods of isolation, cultivation, examination, and control of micro-organisms.

MILK.—Sources of bacteria in milk. Changes produced by bacteria in milk ; souring, sweet curdling, gas formation, ropiness, taints ; causal organisms, their usual sources and methods of prevention. Taints of non-bacterial origin ; their differentiation from bacterial taints. Effects of straining, cooling, and heating on the micro-flora of milk. Raw milk as a source of fault-producing organisms in processed milk and milk products. Microbiological aspects of cleaning and sterilisation of dairy farm equipment. Standards used for grading milk.

WATER.—The importance of a pure water supply for the dairy farm. Bacteria present in natural waters. Sources of contamination ; the effect of pollution with sewage ; water-borne disease.

DISEASES.—Diseases which may be conveyed by milk ; sources of infection. Bacteriology of tuberculosis, contagious abortion, and mastitis ; methods of detection. Elements of immunity.

PRACTICAL WORK.—Microscopical examination of prepared specimens. Demonstration of methods for the sterilisation of culture media and laboratory apparatus, and for the isolation and study of micro-organisms producing faults in milk. Sampling milk ; individual cow and bulk samples. Examination of milk by the plate method, coliform test, Breed's direct microscopic method, dye reduction tests, keeping quality by taste, alcohol, and clot-on-boiling tests. Tracing sources of contamination by the use of milk samples, swab and rinse tests.

N.B.—*Candidates are required to bring to the Oral Examination in this subject their laboratory notebooks certified by their teachers as being the record of their laboratory work carried out during the course.*

VI.—ANIMAL HEALTH.

Main anatomical features of the bovine. Physiology of the bovine, with particular reference to digestion, respiration, reproduction, and milk secretion.

Infectious diseases: anthrax, foot-and-mouth disease, tuberculosis, abortion, John's disease. Disorders of digestive organs. Diseases associated with reproduction and with milk secretion.

Disease of young animals: rickets, scour, blackleg, parasitic diseases.

Diseases of pigs: rickets, anæmia, swine erysipelas, swine fever, parasitic disease.

Veterinary hygiene (isolation, notification, disinfection, and general prophylaxis).

Legislation (Public and Animal Health)—notifiable diseases, Milk and Dairies Order, Food and Drugs Acts, designated milk.

EXAMINATION PAPERS OF PAST YEARS.

Copies of papers set at past Examinations in DAIRY HUSBANDRY may be had on application. Price 1/- per set.

Papers available are those for the year 1948.

Stamps will NOT be accepted in payment for set of Examination Papers.

WINNERS OF DIPLOMA IN 1948

SCOTTISH CENTRE.

JOHN MACKINTOSH EWING, 4 Arden Avenue, Thornliebank, Glasgow.
JAMES STEWART MACFARLANE, "Englewood," Kilmacolm, Renfrewshire.

READING CENTRE.

Diploma with Honours.

KENNETH PERCY RILEY, Ty Hen, Aberystwyth, Cards.
AUDREY PAMELA WHITE, 6 Verona Avenue, West Southbourne, Bournemouth, Hants.

Diploma.

NANCY VERA BARLOW, Studley College, Studley, Warwickshire.
DOROTHY PILAR BENNETT, 1 Cricklegate, Halton, Leeds.
MARGARET LOUISE BENNETT, Lower Gambolds, Finch End, Bromsgrove, Worcs.
MURIEL JOAN CHINN, Carlydnack, Mawnan, Falmouth, Cornwall.

ALICE MONICA JEAN COBBLEDICK, Seale-Hayne Agricultural College, Newton Abbot, Devon.

ANNE DOROTHY COCKS, "Caer Gwent," Gloucester Road, Kingston Hill, Surrey.

EDWARD DEXTER, Half Moon Inn, Withybrook, Coventry.

JEAN HOPE GORDON, 2 Dempster Terrace, St Andrews, Fife.

ROSEMARY HANNINGTON, Cadgwith, Sea Road, Barton-on-Sea, Hants.

BERYL MARY HOLDEN, Pontire Hotel, Newquay, Cornwall.

EDITH ROSEMARY HOOPER, Studley College, Studley, Warwickshire.

KATHLEEN HOSKER, 55 Kings Road, Sutton Coldfield, Warwickshire.

ROBERT GRIFFITH JONES, Felin Eithin, Madryn, Bodvean, Pwllheli, North Wales.

BARBARA MARION MOORE, Staveley, Park Road North, Birkenhead.

DORIS LILIAN MULLINS, Studley College, Studley, Warwickshire.

JENEFER MARY RAWLENCE, Studley College, Studley, Warwickshire.

MARGARET HANNAH SAW, Studley College, Studley, Warwickshire.

ROSALIND ANNE SILVERS, Keepers Cottage, Orton Hills, Penn, Wolverhampton.

RUBY BESSIE VOYSEY, Seale-Hayne Agricultural College, Newton Abbot, Devon.

NATIONAL DIPLOMA IN DAIRY TECHNOLOGY

REGULATIONS FOR EXAMINATIONS IN 1949 IN DAIRY TECHNOLOGY

1. The Societies may hold annually in England and Scotland, under the management of the National Dairy Examination Board appointed by them, Examinations for the National Diploma in Dairy Technology, on dates and at places from time to time appointed and duly announced; the Diploma to be distinguished shortly by the letters "N.D.D.T."

2. Forms of entry for the Examination in England may be obtained from The Secretary, Royal Agricultural Society of England, 16 Bedford Square, London, W.C.1, and when completed must be returned to him, with the entry fee, on or before the specified date.

3. Forms of entry for the Examination in Scotland may be obtained from The Secretary, The Royal Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, Edinburgh 12, and when completed must be returned to him, with the entry fee, on or before the specified date.

4. Any candidate may enter for an Examination either in England or Scotland, but not in both in the same year.

5. As a preliminary to the acceptance of any application for permission to enter for an Examination, a candidate must produce—

(1) from the Head of an approved Dairy Training College or Institute—

(a) A statement that the candidate is in possession of the General School Certificate (England), the Day School Certificate Higher (Scotland), or the School Certificate of the Central Welsh Board; or, in exceptional circumstances, a statement that the general education of the candidate is of an equivalent standard.

(b) Evidence of having attended a Diploma or Degree course in the subjects of the Examination covering at least two academic years (including practical instruction in dairy work, as stated below) at an Agricultural Department of a University, an Agricultural College or a Dairy College, and of having satisfied the authorities thereof as to fitness for admission to the Examination.

(c) A certificate of proficiency in practical dairy work covering six months' instruction based principally on factory practice.

- (2) Evidence of having spent a period of not less than twelve months in a dairy factory or factories or six months in a town milk-processing plant or plants, and six months during the operating season in a country milk-processing factory or factories having manufacturing facilities and of having acquired experience in milk processing and in the manufacture of dairy products.

6. A candidate having obtained the National Diploma in Dairy Husbandry shall be eligible to sit for the Examination in Dairy Technology provided he has attended the requisite course of instruction in the subjects of the Examination, and has spent not less than three months in a town milk-processing plant and three months during the operating season in a country milk-processing factory having manufacturing facilities.

7. A candidate having obtained a Degree in Dairying or in Pure Science at a British University shall be eligible to sit for the National Diploma in Dairy Technology Examination subject to the following conditions :—

- (a) that he has spent at least six months in a dairy factory or factories or three months in a town milk-processing plant or plants, and three months during the operating season in a country milk-processing factory having manufacturing facilities and of having acquired experience in milk processing and in the manufacture of dairy products ;
- (b) has had not less than one year's training in the subjects of the Examination at an approved institution.

8. Candidates desiring to enter for Examination under the provisions of Clauses 6 or 7 must produce evidence of having attended the course of instruction and of having obtained the practical experience prescribed therein.

9. The subjects of the Examination, the maximum marks obtainable, and the marks required for a pass in each subject are :—

WRITTEN AND ORAL EXAMINATIONS.

DAIRY TECHNOLOGY—

1. Dairy Factory Buildings and Equipment		
	(3 hours' paper)	100 50
2. Milk Processing and Distribution and the Manufacture of Dairy Products .	(3 hours' paper)	150 90
3. Organisation of the Milk Industry and Factory Management	(3 hours' paper)	150 90
4. Economics and Accountancy	(3 hours' paper)	100 50
5. Physics and Chemistry	(3 hours' paper)	100 50
6. Dairy Microbiology	(3 hours' paper)	100 50
		<hr/>
		700 380

Oral Examinations may be held at a dairy factory.

An Honours Diploma will be awarded to candidates obtaining an aggregate of 75 per cent (525) of the maximum marks in the Examination, provided that candidates obtain at least 75 per cent (225) of the maximum marks in the Milk Processing and Distribution and the Manufacture of Dairy Products and Organisation of the Milk Industry and Factory Management papers.

10. A candidate who fails in more than two subjects shall fail in the whole Examination.

A candidate who fails in not more than two subjects may, at the discretion of the Board, reappear for these subjects in the following year. A candidate reappearing and failing in one or both subjects shall fail in the whole Examination.

11. The entrance fees shall be as follows :—

For the whole Examination—£5, 5s.

For reappearance—£1, 1s. each subject.

12. The Board reserves the right either to postpone or abandon or to modify an Examination as it thinks fit, and also to refuse admission to any candidate applying to take the Examination.

DATES OF EXAMINATIONS.

SCOTLAND.—At the Dairy School for Scotland, Auchincruive, Ayr.

Written—TUESDAY, WEDNESDAY, and THURSDAY, 6th, 7th, and 8th SEPTEMBER 1949. *Oral*—MONDAY, 19th SEPTEMBER 1949, and following days. Last date for receiving Applications, TUESDAY, 2nd AUGUST 1949.

ENGLAND.—At the University, Reading—TUESDAY, 6th SEPTEMBER 1949, and following days. Last date for receiving Applications, TUESDAY, 26th JULY 1949.

SYLLABUS OF SUBJECTS OF EXAMINATION

I.—DAIRY FACTORY BUILDINGS AND EQUIPMENT.

CONSTRUCTION AND ARRANGEMENT OF FACTORY BUILDINGS.—Selection of the site, design, and dimensions of country collecting and manufacturing plants, town pasteurising and bottling depots. Materials used in the construction of factory buildings. Lighting; ventilation; air conditioning; water supply; drainage; sewage disposal.

THE EQUIPMENT OF DAIRY FACTORIES.—Boilers and steam raising; prime movers; use of electricity; mechanical refrigeration and cold

storage as used in dairy factories. Materials used in construction of dairy plant. The design and construction of plant and equipment used for transporting, receiving, processing and bottling milk, and for the manufacture of cream, butter, cheese, condensed and dried milks, ice-cream, processed cheese; casein and lactose. Precision control, thermometers and thermographs, thermostats. The layout of dairy plant and equipment for specific purposes. Methods of cleaning plant and equipment. Detergents and water softeners.

II.—MILK PROCESSING AND DISTRIBUTION AND THE MANUFACTURE OF DAIRY PRODUCTS.

MILK.—Secretion, composition, and properties. Standards, chemical and bacteriological. Grades of milk. Bacterial flora; pre-pasteurisation requirements. Principles and practice of pasteurisation and sterilisation. Bottling. Cartons. Distribution. Detection, prevention, and remedy of faults. Special treatment of milk, homogenisation, irradiation, &c.

MILK PRODUCTS.—Production of fresh, pasteurised, sterilised, clotted and plastic cream, and cream powders. Maintenance and control of starters for butter and cheese making. Manufacture of sweet, ripened, and neutralised cream butters; all British and the principal foreign varieties of hard-pressed cheese; blue-veined and soft cheese; condensed, evaporated, and dried milks; dried whey; processed cheese; casein and lactose. Manufacture of ice-cream; powders and mixes. Cold and cool air storage of butter and cheese. Cheese ripening. Butter blending and packing. Canning of condensed and evaporated milk and the packing of dried milk under inert gas and vacuum. Factory control of quality. Faults: detection, prevention, and remedy. Grading and judging of dairy produce. Score cards. Legal and trade standards for dairy produce.

III.—ORGANISATION OF THE MILK INDUSTRY AND FACTORY MANAGEMENT.

ORGANISATION.—History of the dairy industry. Relative importance of dairying in the farming economy of Great Britain. Home production and utilisation of milk and milk products. Volume and sources of imports of dairy produce. The marketing of milk and dairy produce. Price regulation. Producers' Boards, Manufacturers' Boards and Associations, Trade Boards.

FACTORY MANAGEMENT.—The Factory and Workshops Act, Sale of Food and Drugs Act, and legislation affecting milk processing, manufacture, and relations between management and staff. Labour: engagement, control, and organisation. Factory records to cover receipts of raw materials, output of finished goods and by-products, and cost of production. Use of the laboratory to control technical efficiency.

IV.—ECONOMICS AND ACCOUNTANCY.

ECONOMICS.—The Factors of Production—land, labour, capital, and enterprise—and their rewards, rent, wages, interest, and profits. Wages and Trades Boards.

Large and small-scale enterprises.

Problems and methods of marketing. The function of middlemen. Marketing Boards.

Sources of economic and financial statistics. Problems of planning and price control.

ACCOUNTANCY.—*General Principles of Double-Entry Book-keeping* ; use of day book, journal, ledger, cash book, and petty cash book.

Preparation of profit and loss account, and balance sheet.

Valuations : Methods of stocktaking. Calculation of depreciation. General bases of valuations.

Income Tax : Preparation of returns—the P.A.Y.E. system for workers.

Cost Accounting : Outline of the general principles, and the chief types of records required.

V.—PHYSICS AND CHEMISTRY.

Volumes of containers; specific gravity; viscosity; surface tension; fluid pressure; barometers; syphons; pumps; levers; pulleys; elementary weighing machines; heat; expansion; thermometry; recording thermometers and thermographs; thermostats; conduction; convection; radiation; evaporation; latent heat; specific heat; calorific value; steam, production and utilisation; safety devices; principles of refrigeration, condensing, drying; homogenisation; irradiation; emulsions and their properties.

Elements, compounds, mixtures; acids, bases, salts; acidity, alkalinity; atmosphere; hydrogen; oxygen; nitrogen; carbon; phosphorus; sulphur; water; metals and their compounds; alcohols; aldehydes; sugars; acetic acid; butyric acid; lactic acid; glycerol; fat; protein; metals and alloys used in dairy plant.

Composition and constituents of milk, variation in the composition of milk; sour milk; cream; butter; separated milk; cheese; whey; margarine; dirt in milk; salt for dairying purposes; ice-cream; condensed milk; dried milks; dried whey; casein; influence of metal on dairy products; legal regulations with regard to milk, butter, cheese, condensed milk, dried milks, margarine; nutritive value of dairy products; analysis; British Standards Institution methods of sampling and analysis; adulteration and its detection; preservatives; detergents; disinfectants; refrigerants; water supply; water softening; dairy effluents and their chemical properties and disposal.

N.B.—*Candidates are required to bring to the Oral Examination in this subject their laboratory notebooks certified by their teachers as being the record of their laboratory work carried out during the course.*

VI. DAIRY MICROBIOLOGY.

GENERAL.—The bacteria yeasts and moulds which commonly occur in milk and milk products. Morphological, cultural, and physiological characters. Effect of environment on growth. Action on the individual constituents of milk; enzymes. Classification (in the case of bacteria—Topley and Wilson's).

MILK.—Microbiology of milk production; sources of contamination, their relative importance, and organisms derived from them. Changes produced by micro-organisms in milk; souring; sweet curdling; gas formation, ropiness, taints; causal organisms and usual sources; methods of prevention. Flavours of non-bacterial origin; their differentiation from those of microbial origin. Effects of straining, cooling, heating, condensing, and drying on the microflora of milk. Standards used for grading milk. Microbiological aspects of cleaning and sterilisation of milk production and milk processing plant.

MILK PRODUCTS.—Starters for cream ripening and cheese making; their propagation and management. Microbiology of butter. Ripening of hard, soft, and blue-veined cheese; factors concerned and their control. Microbiology of condensed, dried, fermented milks, and ice-cream. Defects of milk products; causal organisms and usual sources; preventive measures. Routine laboratory control.

DISEASES.—Diseases which may be conveyed by milk; sources of infection. Bacteriology of tuberculosis, contagious abortion, mastitis, and methods of detection. Elements of immunity.

WATER.—The importance of a pure water supply for the dairy factory and the herd. Bacteria commonly present in natural waters. Sources of contamination; the effect of pollution with sewage; water-borne disease. Microbiological aspects of dairy effluent disposal.

PRACTICAL WORK.—The microscope and its use. Staining (including Gram and Ziehl-Neelsen methods), and microscopical examination of micro-organisms. Preparation and sterilisation of laboratory apparatus. Maintenance of incubators and water baths. Principles of media making; preparation of nutrient broth, bile salt broth, milk, and milk agar. Isolation and study of pure cultures of common milk organisms. Methods for the examination of milk; plate method; coliform test. Breed's direct microscopic method, dye reduction tests, keeping quality tests, and fermentation tests. Detection of thermophilic, thermoduric, and pathogenic organisms in milk; the phosphatase test. Methods of sampling milk; tracing sources of contamination. Sterility tests; rinse and swab methods. Propagation of starters; activity and phage tests. Examination of milk products. Microbiological examination of dairy water supplies. Equipment for the microbiological laboratory.

N.B.—*Candidates are required to bring to the Oral Examination in this subject their laboratory notebooks certified by their teachers as being the record of their laboratory work carried out during the course.*

EXAMINATION PAPERS OF PAST YEARS.

Copies of papers set at past Examinations in DAIRY TECHNOLOGY may be had on application. Price 1/- per set.

Papers available are those for the year 1948.

Stamps will NOT be accepted in payment for set of Examination Papers.

WINNERS OF DIPLOMA IN 1948

SCOTTISH CENTRE.

There were no candidates at this Centre.

READING CENTRE.

GERALD TREVOR ROBERTS, 129 Mudford Road, Yeovil, Som.

CERTIFICATES IN FORESTRY

In 1870 the Society instituted an Examination in Forestry, and granted First and Second-Class Certificates respectively to such students as attained a certain standard of proficiency in the following subjects. Candidates were required to possess a thorough acquaintance with the theory and practice of Forestry, and a general knowledge of the following branches of study, so far as these applied to Forestry: (a) the elements of Forest Botany and Forest Zoology; (b) the elements of Meteorology and Geology; (c) Forest Engineering; and (d) Arithmetic and Book-keeping.

Holders of the First-Class Certificate were entitled to become free Life Members of the Society.

In view of the institution of Examinations for Certificates and Diplomas in Forestry by the Royal Scottish Forestry Society, and by arrangement with that Society, the Board of Directors of the Highland and Agricultural Society of Scotland resolved in 1935 to cease holding further Examinations for the First and Second-Class Certificates, and that, in future, the granting of Certificates and Diplomas be left in the hands of the Royal Scottish Forestry Society.

The list of students who obtained the Highland and Agricultural Society's Certificates in Forestry prior to 1899 appears in the 'Transactions' for the year 1899. A further list of those obtaining Certificates between 1899 and 1935 inclusive appears in the 'Transactions' for the year 1935. The total number of Certificates granted since the commencement of the Examination in 1870 was as follows: First-Class, 43; Second-Class, 38.

VETERINARY CERTIFICATES AND MEDALS

The Society established a Veterinary Department in 1823, but by an arrangement made with the Royal College of Veterinary Surgeons, the Society's examination ceased in 1881. Holders of the Society's Veterinary Certificate are entitled to become members of the Royal College of Veterinary Surgeons on payment of certain fees, without being required to undergo any further examination. The number of students who passed for the Society's Certificate is 1183.

The Society gives annually a limited number of silver medals for Class competition to each of the two Veterinary Colleges in Scotland—the Royal (Dick) Veterinary College, Edinburgh, and the Glasgow Veterinary College, Glasgow.

CHEMICAL DEPARTMENT

PRICES OF FERTILISERS AND FEEDING-STUFFS—
SEASON 1949.

(Cash Prices as at 2nd February. These prices are subject to variation from month to month or oftener.)

FERTILISERS.

Name of Fertiliser.	Guarantee.	Price per Ton.	Price per Unit.
Superphosphate * (March-June)	18% Sol. Phos. Acid	£ s. d. 5 17 6	s. d. 6 6½
Sulphate of Ammonia (neutral) * (March-June)	20.6% Nitrogen	5 19 0	6 7½
Basic Slag *†	12% Total Phos. Acid	10 6 6	10 0½
" " *†	13% Total Phos. Acid	10 8 0	10 1½
" " *†	14% Total Phos. Acid	2 16 6	4 8½
" " *† (Bessemer)	18% Total Phos. Acid	2 19 6	4 7
North African Ground Mineral Phosphate *†	18.3% Total Phos. Acid	3 2 6	4 5½
Bone Meal (Imported)	25% Total Phos. Acid	3 15 6	4 1½
Chilean Nitrate of Soda *	4% Nitrogen	5 5 0	4 2½
Chilean Potash Nitrate *	20% Total Phos. Acid	25 0 0	N 55 7
" Nitro Chalk " *	16% Nitrogen	11 0 0	TPA 13 10½
Sulphate of Potash	15% Nitrogen	16 1 0	N 15 6½
Muriate of Potash	10% Potash	10 4 0	P 8 9
Potassic Mineral Phosphate	15.5% Nitrogen	18 15 0	13 2
" " (March-June)	43.5% Potash	13 13 0	7 8½
	60% Potash	7 5 0	4 6½
	22% Total Phos. Acid	7 7 6	TPA 5 1
	6% Potash		P 5 6
	22% Total Phos. Acid		TPA 5 2
	6% Potash		P 5 7

The prices for all fertilisers are cash prices for two-ton lots in bags at Leith or Glasgow, unless otherwise stated. Where prices are quoted carriage paid, there is a reduction, in certain cases, of from 5/- to 10/- per ton when lifted *ex* Sellers' stores.

* Carriage paid to any railway station in six-ton lots. Four-ton lots 2/6 more per ton.

† The fineness is such that 80% of the powder will pass through the prescribed sieve.

‡ The fineness is such that 90% of the powder will pass through the prescribed sieve. 85% solubility in citric acid.

N.B.—When these units are multiplied by the percentages found by analysts they will produce a value representing very nearly the cash price per ton at which Fertilisers may be bought in fine sowable condition at Leith.

LIME AND LIMESTONE.

SHELL LIME. (Calcium Oxide Guaranteed.)	Price per Ton.	GROUND LIME. (Calcium Oxide Guaranteed.)	Price per Ton (in bags).	GROUND LIMESTONE. (Calcium Carbonate Guaranteed.)	Price per Ton.
At Greenleighton (85%)	£ s. d. 2 3 7	At Loanhead, Shotts (70%)	£ s. d. 3 8 0	At Loanhead, Shotts (94%)	£ s. d. 1 13 9
At Loanhead, Shotts (70%)	2 7 3	At Middleton, Gore- bridge (60%)	3 5 7	At Grange (90%)	1 8 6
At Esperston, Gore- bridge (70%)	2 5 7	At Fourstones (75%)	2 16 8	At Middleton, Gore- bridge (80%)	1 12 5
At Middleton, Gore- bridge (70%)	2 5 4			At Saltoun (85%)	1 15 6
At Alston (91%)	1 18 0			At Dufftown (85%)	1 8 10
At Kelsley (90%)	2 1 1			At Kirkmichael (75%)	1 11 11
At Bothel (88%)	2 1 10			Northumberland (95%)	1 12 10 (see works)
At Grindale Dykes (80%)	1 19 2			Cumberland (98%)	1 13 0 (see works)

FEEDING-STUFFS.

Name of Feeding-Stuff.	Price per Ton.
	£ s. d.
Linseed Cake (Home), 8% Oil, 28% Albuminoids	11 7 6
„ (Expeller), 13% Oil, 33% Albuminoids	12 5 0
Cotton Seed Cake (Egyptian) (undecorticated) (home made), 4.5% Oil, 22% Albuminoids	8 0 0
Decorticated Cotton Seed Cake, 47.50% Oil and Albuminoids	10 15 0
Decorticated Ground Nut Meal, Extracted, 55% Oil and Albuminoids	10 10 0
Ground Nut Cake, Decorticated (Expeller), 57.60% Oil and Albuminoids	10 10 0
Palm Kernel Cake	8 7 6
Rice Bran Meal	8 12 6
Wheat Feed (Bran), straight run	9 10 0
Dried Grains †	(From 7 10 0 To 9 0 0)
Locust Beans (Kibbled) ‡	10 2 6
Maize †	10 2 6
„ (Flaked) ‡	13 12 6
Home Oats (Feeding)	(Min 18 15 0 Max. 20 13 4)
White Fish Meal, 4% Oil, 64% Albuminoids (at Aberdeen)	24 10 8

All the above are controlled prices and are for one-ton lots direct ex import quay or mill, unless otherwise stated.

† Bags extra.

‡ Including Bags.

CLASSIFICATION OF FERTILISERS.

BONE MEALS	{ Genuine Bone Meal contains about 20 per cent Phosphoric Acid and about 4 per cent Nitrogen. If Phosphoric Acid is low, Nitrogen will be high, and conversely.
MIXTURES AND COMPOUND FERTILISERS	{ To be valued according to the following units: Nitrogen, 9/10; Soluble Phosphoric Acid, 5/3.4; Insoluble Phosphoric Acid, 3/5; and Potash, 4/11 (from muriate). The value so arrived at will be the value at Leith, exclusive of the cost of mixing, bags and bagging, which may be taken at 37/6 per ton.

INSTRUCTIONS FOR VALUING FERTILISERS.

The unit used for the valuation of fertilisers is the hundredth part of a ton, and as the results of analyses are expressed in parts per hundred, the percentage of any ingredient when multiplied by the price of the unit of that ingredient represents the value of the quantity of it contained in a ton.

As an example take muriate of potash; a good sample (see p. 56) will be guaranteed to contain 60 per cent of oxide of potash. All potash fertilisers are valued according to the amount of potash (oxide of potash) they yield, and muriate of potash yields 60 per cent of potash (K_2O)—i.e., 60 units per ton; and as a ton of muriate of potash costs £13, 13s., the price of the unit is the sixtieth part of that—viz., $4/6\frac{1}{2}$. If on analysis a sample of muriate of potash guaranteed to contain 60 per cent of potash is found to contain only 56 per cent, the price per ton will be $18/2$ (four times $4/6\frac{1}{2}$) less—viz., £12, 14s. 10d.

Similarly with all other fertilisers, the price per unit is derived from the price per ton of a sample of good material up to its guaranter, and

therefore the proper price per ton is found by multiplying the price of the unit of the valuable ingredient by the percentage as found by analysis. If a fertiliser contains more than one valuable ingredient, the unit value of each ingredient is multiplied by its percentage, and the values so found when added together give approximately the price per ton.

The commercial values of fertilisers are determined by means of the UNITS in the following manner :—

Take the results of analysis of the fertiliser, and look for the following substances :—

Soluble phosphoric acid	}	No other items but these are to be valued.
Insoluble phosphoric acid		
Total phosphoric acid		
Nitrogen		
Potash		

In the Statutory Statement required under the Fertilisers and Feeding Stuffs Act, the seller must express the percentages of fertilising ingredients in the above terms.

Suppose the fertiliser is a superphosphate. The February price per unit of phosphoric acid in superphosphate (18 per cent grade) is $6\frac{6}{4}$, and if a consignment contains 17 per cent soluble phosphoric acid it is valued thus—

Soluble phosphoric acid. 17 times $6\frac{6}{4}$, equal to £5, 10s. 10d.

Insoluble phosphoric acid is not valued in a superphosphate.

Suppose the fertiliser is a compound containing 6 per cent nitrogen, 8 per cent soluble phosphoric acid, 1 per cent insoluble phosphoric acid, and 5 per cent potash. From the units given on p. 57 for "Mixtures and Compound Fertilisers," the value of this compound fertiliser is obtained as follows :—

The value of the—

Nitrogen will be	£2	19	0	per ton
Soluble phosphoric acid will be	2	6	4	"
Insoluble phosphoric acid will be	0	3	5	"
Potash will be	1	4	7	"
	<hr/>			
	£6 13 4			

The value of this fertiliser will thus be £6, 13s. 4d. per ton, exclusive of the cost of mixing, bags and bagging, which may be taken at 37/6 per ton. It will be seen that the potash is valued on the assumption that it is derived from muriate.

Notes.—The units have reference solely to the MARKET PRICES of FERTILISERS, and not to their AGRICULTURAL VALUES.

TABLE OF COMPENSATION VALUES FOR 1949.

TABLE SHOWING THE VALUE OF FEEDING-STUFFS AS MANURE PER TON, AND THE COMPENSATION VALUE PER TON OF FOOD CONSUMED, BASED ON THE AVERAGE UNIT PRICES OF FERTILISERS FOR 1949.

The following is a Table showing (under Section A) the average proportions of nitrogen, phosphoric acid, and potash present in the feeding-stuffs named. The Table also shows the value per unit of nitrogen, phosphoric acid, and potash, the prices per unit being the value per unit for compound manures prevailing for 1949. Under Section B of the Table is shown the compensation value per ton of food consumed for each of the feeding-stuffs named, based on the unit prices for 1949. Column (1) of Section B of the Table shows the value per ton recovered in dung; while the remaining two columns show the residual values per ton after one crop and two crops have been removed.

The residual value, after one crop has been removed, is taken as one-half of the original residual value. Residual values, after one crop has been removed, are reduced by one-half after each crop.

Foods.	Nitrogen.		
	Per cent in food.	Value at 9s. 10d. per unit.	Two-fifths value to manure.
	(1)	(2)	(3)
Cotton-cake, decorticated	6.90	s. d. 67 10	s. d. 27 2
Cotton-cake, undecorticated	3.54	34 10	13 11
Linseed cake	4.75	46 9	18 8
Linseed	3.60	35 5	14 2
Soya-bean cake	6.85	67 4	26 11
Palm-nut cake	2.50	24 7	9 10
Cocoa-nut cake	3.40	33 5	13 4
Earth-nut cake	7.62	74 11	30 0
Rape cake	4.90	48 2	19 3
Beans	4.00	39 4	15 9
Peas	3.60	35 5	14 2
Wheat	1.80	17 8	7 1
Barley	1.65	16 3	6 6
Oats	2.00	19 8	7 10
Maize	1.70	16 9	6 8
Rice-meal	1.90	18 8	7 6
Locust beans	1.20	11 10	4 9
Malt	1.70	16 9	6 8
Malt culms	3.90	38 4	15 4
Bran	2.50	24 7	9 10
Brewers' and distillers' grains (dried)	3.30	32 5	13 0
Brewers' and distillers' grains (wet)	0.81	8 0	3 2
Dried distillery dreg	5.31	52 3	20 11
Clover hay	2.24	22 0	8 10
Meadow hay	1.50	14 9	5 11
Wheat straw	0.45	4 5	1 9
Barley straw	0.40	3 11	1 7
Oat straw	0.50	4 11	2 0
Mangolds	0.22	2 2	0 10
Swedes	0.25	2 6	1 0
Turnips	0.18	1 9	0 8
Fish-meal	8.98	88 4	35 4

The figures in column (10) are the

A.						B.		
VALUE PER TON AS MANURE.						COMPENSATION VALUE PER TON OF FOOD CONSUMED.		
Phosphoric Acid.			Potash.			(1) Value re- covered in dung.	Residual Value after	
Per cent in food	Value at 5s. 9d. per unit.	Three- fourths value to manure.	Per cent in food.	Value at 4s. 11d. per unit.	Three- fourths value to manure.		(2) One crop.	(3) Two crops.
(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	s. d.	s. d.		s. d.	s. d.	s. d.	s. d.	s. d.
3.10	17 10	13 5	2.00	9 10	7 5	48 0	24 0	12 0
2.00	11 6	8 8	2.00	9 10	7 5	30 0	15 0	7 6
2.00	11 6	8 8	1.40	6 11	5 2	32 6	16 3	8 2
1.54	8 10	6 8	1.37	6 9	5 1	25 11	13 0	6 6
1.30	7 6	5 8	2.20	10 10	8 2	40 9	20 5	10 2
1.20	6 11	5 2	0.50	2 6	1 11	16 11	8 6	4 3
1.40	8 1	6 1	2.00	9 10	7 5	28 10	13 5	6 9
2.00	11 6	8 8	1.50	7 5	5 7	44 3	22 2	11 1
2.50	14 5	10 10	1.50	7 5	5 7	35 8	17 10	8 11
1.10	6 4	4 9	1.30	6 5	4 10	25 4	12 8	6 4
0.85	4 11	3 8	0.96	4 9	3 7	21 5	10 9	5 4
0.85	4 11	3 8	0.53	2 7	1 11	12 8	6 4	3 2
0.75	4 4	3 3	0.55	2 8	2 0	11 9	5 11	2 11
0.60	3 5	2 7	0.50	2 6	1 11	12 4	6 2	3 1
0.60	3 5	2 7	0.37	1 10	1 5	10 8	5 4	2 8
0.60	3 5	2 7	0.37	1 10	1 5	11 6	5 9	2 11
0.80	4 7	3 5	0.80	3 11	2 11	11 1	5 7	2 9
0.80	4 7	3 5	0.60	2 11	2 2	12 3	6 2	3 1
2.00	11 6	8 8	2.00	9 10	7 5	31 5	15 9	7 10
2.70	15 6	11 8	1.45	7 2	5 5	26 11	13 6	6 9
1.61	9 3	6 11	0.20	1 0	0 9	20 8	10 4	5 2
0.42	2 5	1 10	0.05	0 3	0 2	5 2	2 7	1 4
0.44	2 6	1 11	0.22	1 1	0 10	23 8	11 10	5 11
0.57	3 3	2 5	1.50	7 5	5 7	16 10	8 5	4 3
0.40	2 4	1 9	1.60	7 10	5 11	13 7	6 10	3 5
0.24	1 5	1 1	0.80	3 11	2 11	5 9	2 11	1 5
0.18	1 0	0 9	1.00	4 11	3 8	6 0	3 0	1 6
0.24	1 5	1 1	1.00	4 11	3 8	6 9	3 5	1 8
0.07	0 5	0 4	0.40	2 0	1 6	2 8	1 4	0 8
0.06	0 4	0 3	0.22	1 1	0 10	2 1	1 1	0 6
0.05	0 3	0 2	0.30	1 6	1 2	2 0	1 0	0 6
7.24	41 8	31 3	0.50	2 6	1 11	68 6	34 3	17 2

sum of columns (3), (6), and (9).

ENTOMOLOGICAL DEPARTMENT

Consulting Zoologist to the Society—(Vacant).

REPORTS ON THE ANIMAL ENEMIES OF CROP PLANTS AND LIVE STOCK (INCLUDING POULTRY).

The Consulting Zoologist is prepared to send to any Member of the Society a Report on damage to, or diseases of, plants and animals due to animal agency (Insects, Mites, Worms, Snails, Slugs, Birds, and the Smaller Mammals), and will advise Members regarding insects or allied animals which, in any stage of their development, infest—

- | | |
|-----------------------------------|-------------------------------------|
| (a) Farm crops. | (d) Fruit and fruit trees. |
| (b) Stored grain and foodstuffs. | (e) Forest trees and stored timber. |
| (c) Garden and greenhouse plants. | (f) Live stock (including poultry). |

Any Member consulting the Society should submit full particulars of the damage or disease upon which advice is desired. In addition, there should be sent specimens of the injured plants, or the injured parts of plants, &c., as well as specimens of the insects or animals believed to be the cause of the injury.

Specimens should be sent in tin or wooden boxes, or in quills, in order to prevent injury in transmission.

Letters and parcels (carriage or postage paid) should be addressed to the Secretary, 8 Eglinton Crescent, Edinburgh 12.

BOTANICAL DEPARTMENT

Consulting Botanist to the Society—(Vacant).

The Society has fixed the following scale of charges for the examination of plants and seeds for the *bona fide* and individual use and information of members of the Society (not being seedsmen), who are particularly requested, when applying to the Consulting Botanist, to mention the kind of examination required, and to quote its number as appearing in the undernoted Scale of Charges. The charge for examination must be paid at the time of application, and the carriage or postage on all parcels must be prepaid.

Scale of Charges for Examinations.

1. A report on the purity, amount, and nature of foreign materials, and the germinating power of a sample of seed 1s.
2. Determination of the species of any weed or other plant, or of any vegetable parasite, with a report on its habits and the means for its extermination or prevention 1s.
3. Report on any disease affecting farm crops 1s.
4. Determination of the species of any natural grass or fodder plant, with a report on its habits and pasture or feeding value 1s.

The Consulting Botanist's Reports are furnished to enable members—purchasers of seeds and corn for agricultural or horticultural purposes—to test the value of what they buy, and are not to be used or made available for advertising or trade purposes by seedsmen or otherwise.

Purchase of Seeds.

The purchaser should obtain from the vendor, by invoice or other writing, the proper designation of the seeds bought, with a guarantee of the percentage of purity and germination, and of its freedom from ergot, and in the case of clover, from the seeds of dodder or broomrape.

It is strongly recommended that the purchase of *prepared mixtures* of seeds should be avoided. The different seeds should be purchased separately and mixed by the farmer: mixtures cannot be tested for germination.

The Sampling of Seeds.

The utmost care should be taken to secure a fair and honest sample. This should be drawn from the bulk delivered to the purchaser, and not from the sample sent by the vendor.

When legal evidence is required, the sample should be taken from the bulk, and placed in a sealed bag in the presence of a witness. Care should be taken that the sample and bulk be not tampered with after delivery, or mixed or brought in contact with any other sample or bulk.

At least one ounce of grass and other small seeds should be sent, and two ounces of cereals and the larger seeds. When the bulk is obviously impure the sample should be at least double the amount specified. Grass seeds should be sent at least four weeks, and seeds of clover and cereals two weeks, before they are to be used.

The exact name under which the sample has been sold and purchased should accompany it.

Reporting the Results.

The Report will be made on a schedule in which the nature and amount of impurities will be stated, and the number of days each sample has been under test, with the percentage of the seeds which have germinated.

"Hard" clover seeds, though not germinating within the time stated, will be considered good seeds, and their percentage separately stated.

The impurities in the sample, including the chaff of the species tested, will be specified in the schedule, and only the percentage of the pure seed of that species will be reported upon; but the REAL VALUE of the sample will be stated. The Real Value is the combined percentages of purity and germination, and is obtained by multiplying these percentages and dividing by 100: thus in a sample of Meadow Fescue having 88 per cent purity and 95 per cent germination, 88 multiplied by 95 gives 8360, and this divided by 100 gives 83·6, the Real Value.

Selecting Specimens of Plants.

The whole plant should be taken up and the earth shaken from the roots. If possible the plants should be in flower or fruit. They must be packed in a light box, or in a firm paper parcel.

Specimens of diseased plants or of parasites should be forwarded as fresh as possible. They must be placed in a bottle, or packed in tinfoil or oil-silk.

All specimens should be accompanied with a letter specifying the nature of the information required, and stating any local circumstances (soil, situation, &c.) which, in the opinion of the sender, would be likely to throw light on the inquiry.

NOTE.—Members are reminded that Seeds may now be tested at the Department of Agriculture for Scotland Seed-testing Station. Samples should be addressed to the Seed-testing Station, East Craigs, Corstorphine, Edinburgh.

PREMIUMS OFFERED

1949

GROUP I.—REPORTS

GENERAL REGULATIONS.

1. It is to be distinctly understood that the Society is not responsible for the views, statements, or opinions of any of the writers whose papers are published in the 'Transactions.'

2. All reports must be legibly written, and on one side of the paper only; they must specify the number and subject of the Premium for which they are in competition; they must bear a distinguishing motto, and be accompanied by a sealed letter, similarly marked, containing the name and address of the reporter—initials must not be used.

3. No sealed letter, unless belonging to a report found entitled to the Premium offered, or a portion of it, will be opened without the author's consent.

4. Reports for which a Premium, or a portion of a Premium, has been awarded, become the property of the Society, and cannot be published in whole or in part, or circulated in any manner, without the consent of the Directors. All other papers will be returned to the authors if applied for within twelve months.

5. The Society is not bound to award the whole or any part of a Premium.

6. All reports must be of a practical character, containing the results of the writer's own observation or experiment, and the special conditions attached to each Premium must be strictly fulfilled. General essays, and papers compiled from books, will not be rewarded or accepted. Weights and measurements must be indicated by the imperial standards.

7. The Directors, before or after awarding a Premium, shall have power to require the writer of any report to verify the statements made in it.

8. The decisions of the Board of Directors are final and conclusive as to all matters relating to Premiums, whether for Reports or at General or District Shows; and it shall not be competent to raise any question or appeal touching such decisions before any other tribunal.

9. The Directors will welcome papers from any Contributor on any suitable subject, whether included in the Premium List or not ; and if the topic and the treatment of it are both approved, the writer may be remunerated and his paper published.

SECTION 1.—THE SCIENCE AND PRACTICE OF AGRICULTURE.

FOR APPROVED REPORTS.

1. On any useful practice in Rural Economy adopted in other countries, and susceptible of being introduced with advantage into Scotland—The Gold Medal. To be lodged by 1st November in any year.

The purpose chiefly contemplated by the offer of this premium is to induce travellers to notice and record such particular practices as may seem calculated to benefit Scotland. The Report to be founded on personal observation.

2. Approved Reports on other suitable subjects. To be lodged by 1st November in any year.

SECTION 2.—ESTATE IMPROVEMENTS.

FOR APPROVED REPORTS.

1. By the Proprietor in Scotland who shall have executed the most judicious, successful, and extensive Improvement—The Gold Medal, or Ten Pounds. To be lodged by 1st November in any year.

Should the successful Report be written for the Proprietor by his resident factor or farm manager, a Minor Gold Medal will be awarded to the writer in addition to the Gold Medal to the Proprietor.

The merits of the Report will not be determined so much by the mere extent of the improvements, as by their character and relation to the size of the property. The improvements may comprise reclaiming, draining, enclosing, planting, road-making, building, and all other operations proper to landed estates. The period within which the operations may have been conducted is not limited, except that it must not exceed the term of the Reporter's proprietorship.

2. By the Proprietor or Tenant in Scotland who shall have reclaimed within the ten preceding years not less than forty

acres of Waste Land—The Gold Medal, or Ten Pounds. To be lodged by 1st November in any year.

3. By the Tenant in Scotland who shall have reclaimed within the ten preceding years not less than twenty acres of Waste Land—The Gold Medal, or Ten Pounds. To be lodged by 1st November in any year.

4. By the Tenant in Scotland who shall have reclaimed not less than ten acres within a similar period—The Medium Gold Medal, or Five Pounds. To be lodged by 1st November in any year.

The Reports in competition for Nos. 2, 3, and 4 may comprehend such general observations on the improvement of waste lands as the writer's experience may lead him to make, but must refer especially to the lands reclaimed—to the nature of the soil—the previous state and probable value of the subject—the obstacles opposed to its improvement—the details of the various operations—the mode of cultivation adopted—and the produce and value of the crops produced. As the required extent cannot be made up of different patches of land, the improvement must have relation to one subject; it must be of profitable character, and a rotation of crops must have been concluded before the date of the Report. *A detailed statement of the expenditure and return* and a certified measurement of the ground are requisite.

5. By the Proprietor or Tenant in Scotland who shall have improved within the ten preceding years the Pasturage of not less than thirty acres, by means of top-dressing, draining, or otherwise, without tillage, in situations where tillage may be inexpedient—The Gold Medal, or Ten Pounds. To be lodged by 1st November in any year.

6. By the Tenant in Scotland who shall have improved not less than ten acres within a similar period—The Minor Gold Medal. To be lodged by 1st November in any year.

Reports in competition for Nos. 5 and 6 must state the particular mode of management adopted, the substances applied, the elevation and nature of the soil, its previous natural products, and the changes produced.

SECTION 3.—HIGHLAND INDUSTRIES.

FOR APPROVED REPORTS.

1. The best mode of treating native Wool; cleaning, carding, dyeing, spinning, knitting, and weaving by hand in the Highlands and Islands of Scotland—Five Pounds. To be lodged by 1st November in any year.

SECTION 4.—MACHINERY.

FOR APPROVED REPORTS.

To be lodged by 1st November in any year.

SECTION 5.—FORESTRY.

FOR APPROVED REPORTS.

1. On Plantations of not less than eight years' standing formed on deep peat-bog—The Medium Gold Medal, or Five Pounds. To be lodged by 1st November in any year.

The Premium is strictly applicable to deep peat or flow moss ; the condition of the moss previous to planting, as well as at the date of the Report, should, if possible, be stated.

The Report must describe the mode and extent of the drainage, and the effect it has had in subsiding the moss—the trenching, levelling, or other preliminary operations that may have been performed on the surface—the mode of planting—kinds, sizes, and number of trees planted per acre—and their relative progress and value, as compared with plantations of a similar age and description grown on other soils in the vicinity.

GROUP II.—DISTRICT GRANTS

APPLICATIONS.

Forms of Application may be obtained from the Secretary, 8 Eglinton Crescent, Edinburgh 12, which should be completed and returned on or before **1st November 1949**, in respect of a Grant commencing in the following year.

RENEWAL OF GRANT.—Applications for **renewal** of a particular Grant will be entertained only after the lapse of a specified interval of years (as undernoted) from the termination of the previous Grant, without prejudice, however, to the competency of applying in such intermediate years for a Grant in any other class.

Class.	Interval.
1. Grants of £15 for Show Premiums for Horses, Cattle, Sheep, and Pigs	4 years.
2. Grants of £20 in respect of Stallions engaged for Agricultural purposes	3 years.
3. Grants of Silver Medals in aid of Premiums	2 years.
4. Special Grants	—
5. Grants of £10 to Federations of S.W.R.I. for Show or Exhibition Prizes	2 years.

CLASS 1.

LOCAL AGRICULTURAL SOCIETIES—GRANTS OF £15 FOR SHOW PREMIUMS FOR HORSES, CATTLE, SHEEP, AND PIGS.

REGULATIONS, 1949.

1. CLASS OF STOCK—LIMIT OF GRANTS, £340.—The Royal Highland and Agricultural Society will make Grants to Local Societies for Prizes for *Breeding Animals* in any of the following classes of Stock, viz. :—

Cattle.

Shorthorn.
Aberdeen-Angus.
Galloway.
Belted Galloway.
Highland.
Ayrshire.
British Friesian.
Red Poll.
Jersey.
Shetland.

Pigs.

Any Pure Breed.

Horses.

Draught Horses.
Hunters.
Hackneys.
Ponies.
Shetland Ponies.

Sheep.

Blackface.
Cheviot.
Border-Leicester.
Half-Bred.
Shropshire.
Oxford Down.
Suffolk.
Wensleydale.

Cross-bred ¹ animals are not eligible. The Prizes must be confined to *Breeding Animals*; "bullocks," "geldings," "wethers," and "hog pigs" are excluded.

¹ *Exceptions to this rule may, however, be authorised by the Board of Directors, on application. The Directors are prepared to consider applications from Local Societies which desire to use their Grants, or part thereof, as prizes for cross-bred calves and one-year-old cross-bred cattle.*

2. All Competitions must be at the instance of a local Society. A Committee of Management shall be appointed, and either the Convener of the Committee or the Secretary of the Society must be a Member of The Royal Highland and Agricultural Society of Scotland.

3. GRANT TO SOCIETY. £15.—The portion of the Grant to any one local Society shall not exceed the sum of £15 in any one year.

4. ALLOCATION OF GRANT.—The Grant from The Royal Highland and Agricultural Society shall not be applied as a Grant in aid of the Premiums offered by the local Society, but must be offered in the form of separate Prizes for the animals chosen ; and the offer of the Prizes must be announced in the Premium List and Catalogue of the Show as “ presented by The Royal Highland and Agricultural Society of Scotland.”

5. CONTINUANCE OF GRANT—THREE YEARS.—The Money Grant shall continue for three alternate years, provided always that the local Society shall, in the two intermediate years, continue the Competition by offering Premiums for the same class of Stock as that selected in each previous year to compete for The Royal Highland and Agricultural Society's Prizes.

If no Competition takes place for two consecutive years the Grant expires.

6. MEDALS IN INTERMEDIATE YEARS.—In the two intermediate years The Royal Highland and Agricultural Society will place three Silver Medals at the disposal of each local Society, for the same classes of Stock as those for which the Money Premiums are offered, provided that not less than three lots are exhibited in the same class.

7. When it is agreed to hold the General Show of the Society in any one of the Show Divisions, no local Society may hold a Show within that Division in the three months immediately preceding the date of the General Show. In the event of a Show being held, the entire Grant to the local Society will be cancelled.

8. RULES OF COMPETITION.—The Rules of Competition for the Premiums, the funds for which are derived from Grants of The Royal Highland and Agricultural Society, shall be such as are generally enforced by the local Society in the case of Premiums offered from its own funds.

9. AREA AND PARISHES—FIVE PARISHES.—When making application for Grants from The Royal Highland and Agricultural Society, the local Society must delineate the area and the number of parishes comprised in the district, and, *except in special cases*, no local Society shall be entitled to a Grant whose Show is not open to at least five parishes.

10. REPORTS.—Forms of Report will be furnished to the Secretaries of local Societies. Detailed Reports of the Competitions for the Society's Premiums must be given and the completed Reports, duly signed and certified, must be lodged with the Secretary of The Royal Highland and Agricultural Society as soon as possible after the Show, and in no case later than 1st November. These Reports are subject to the approval of the Directors of The Royal Highland and Agricultural Society, against whose decision there shall be no appeal.

The Grant will lapse if no Report is lodged by the due date.

11. GRANTS—WHEN PAID.—The Grants made to local Societies will be paid in December after the Reports of the awards of the

Prizes have been received and found to be in order and passed by the Board of Directors, the Money Grants being paid to the Secretaries of the local Societies and the Medals sent direct to the winners. *The Secretary of the local Society must not on any condition whatever pay any Premium offered by The Royal Highland and Agricultural Society until he has been informed that the awards are in order and has received the Grant from The Royal Highland and Agricultural Society.*

12. RENEWAL OF GRANT.—No application for renewal of a Grant to a local Society will be entertained until after the expiry of four years from the termination of the last Grant.

13. DISPOSAL OF APPLICATIONS.—In disposing of applications for District Grants, the Directors of The Royal Highland and Agricultural Society shall keep in view the length of interval that has elapsed since the expiration of the last Grant, giving priority to those local Societies which have been longest off the list.

Grants in 1949.

5th and Final Year—GRANT OF £15.

1. CARNWATH AGRICULTURAL SOCIETY.

Convener—John Struthers, Anston, Dunsyre, Lanark.

Secretary—John N. Lennox, Commercial Bank Office, Carnwath, Lanarkshire.

Granted 1939. (Grants in abeyance 1940-45—on account of the war.)

2. DUNBARTONSHIRE AGRICULTURAL SOCIETY.

Convener—Lieut.-Colonel Kenneth Barge, D.S.O., M.C., D.L., Armadale, Rhu.

Secretary—George M. Charleson, Commercial Bank of Scotland Ltd., Alexandria, Dunbartonshire.

Granted 1939. (Grants in abeyance 1940-45—on account of the war.)

3. EASTERN DISTRICT OF STIRLINGSHIRE AGRICULTURAL ASSOCIATION.

Convener—William Morton, Bensfield, Falkirk.

Secretary—Robert Waugh, Auction Mart, Falkirk.

Granted 1935. (Grant in abeyance 1937—on account of Alloa Show; in 1938—no Show held; in 1940-48—on account of the war.)

4. LOCKERBIE AGRICULTURAL SOCIETY.

Convener—Captain Joseph Steel of Kirkwood, Lockerbie.

Secretaries—Henderson & Mackay, Solicitors, Lockerbie.

Granted 1939. (Grants in abeyance 1940-45—on account of the war.)

5. MID-ARGYLL AGRICULTURAL SOCIETY.

Convener—Andrew R. Page, Chamberlain of Argyll, Inveraray.

Secretary—J. G. Mathieson, Ri-Cruin, Kilmartin, by Lochgilphead, Argyll.

Granted 1939. (Grants in abeyance 1940-45—on account of the war.)

6. STRATHSPEY FARMERS' CLUB.

Convener—James Gordon, Lower Delliefure, Grantown-on-Spey.

Secretary—Thomas Gordon, M.A., LL.B., 33 The Square, Grantown-on-Spey.

Granted 1938. (Grants in abeyance 1938, 1940-48—on account of the war.)

7. STIRLING AGRICULTURAL SOCIETY.

Convener—William Muirhead, Foot o' Green, Stirling.

Secretary—William Thomson, Estates Office, Polmaise, Stirling.

Granted 1939. (Grants in abeyance 1940-45—on account of the war.)

4th (Intermediate) Year—3 SILVER MEDALS.**8. BLACK ISLE FARMERS' SOCIETY.**

Convener—Ian MacLeod, Torgorm, Canon Bridge.

Secretary—Robert Strachan, M.A., The Schoolhouse, Avoch, Ross-shire.

Granted 1937. (Grant in abeyance 1938 ; in 1940-47—on account of the war ; 1948—on account of Inverness Show.)

9. BUCHAN AGRICULTURAL SOCIETY.

Convener—Douglas J. Fowles, Millhill, Longside, Mintlaw Station, Aberdeenshire.

Secretary—W. S. Cranna, Bank House, Mintlaw.

Granted 1946. (No Show 1948.)

10. BUTE AGRICULTURAL SOCIETY.

Convener—Edward Harvey, Windyhall Farm, Rothesay.

Secretary—H. W. Whiteford, 30A Bishop Street, Rothesay.

Granted 1946.

11. CARLUKE AGRICULTURAL SOCIETY.

Convener—A. S. Lawson, Easterseat, Carluke.

Joint Secretaries—William Hamilton and W. Ramsay Robertson, 40 Cassels Street, Carluke.

Granted 1940. (Grants in abeyance 1940-45—on account of the war.)

12. CROMAR, UPPER DEE, AND DONSIDER AGRICULTURAL SOCIETY.

Convener—Lieut.-Colonel William Lilburn of Coull, Aboyne, Aberdeenshire.

Secretary—Wm. Fowle, North Bank House, Tarland, Aberdeenshire.

Granted 1939. (Grants in abeyance 1940-46—on account of the war.)

13.*EAST OF FIFE AGRICULTURAL SOCIETY.

Convener—Sir John E. Gilmour, Bt., D.S.O., of Montrave, Leven.

Secretary—D. MacCulloch, National Bank of Scotland Ltd., Elie, Fife.

Granted 1946.

14. FETTERCAIRN FARMERS' CLUB.

Convener—

Secretary—W. D. Johnston, Southesk Granaries, Montrose.

Granted 1946.

15. FORMARTINE AGRICULTURAL ASSOCIATION.

Convener—E. B. Lee, Bullroad, Tarves, Aberdeenshire.

Secretaries—Alfred Marr and David S. Minto, Cultercullen, Udy Station, Aberdeenshire.

Granted 1938. (Grants in abeyance 1940-47—on account of the war.) (No Show 1948.)

16. KILFINICHEN AND KILVICKEON AGRICULTURAL SOCIETY.

Convener—Donald Macdonald, Sheepknowe, Bunessan, Isle of Mull.

Secretary—William R. MacDougall, Uisgean, Bunessan, Isle of Mull.

Granted 1946.

17. KINCARDINESHIRE FARMERS' CLUB.

Convener—A. Fotheringham, Auctioneer, Laurencekirk.

Secretary—Grant M'Robert, Solicitor, Stonehaven.

Granted 1946.

18.*LESLIE AND DISTRICT AGRICULTURAL SOCIETY.

Convener—William Kerr, Kininmonth, Kinglassie, Fife.

Secretary—James S. Hardie, 22 Paterson Park, Leslie, Fife.

Granted 1946.

19. SKYE AGRICULTURAL SOCIETY.

Convener—A. MacCallum, D.O.A.S., Estates Office, Portree, Isle of Skye.

Secretary—S. Lindsay Hamilton, D.O.A.S., Estates Office, Portree, Isle of Skye.

Granted 1938. (Grants in abeyance 1940-47—on account of the war.)

20. STEWARTRY AGRICULTURAL SHOW.

Promoted by the St Mary's Isle Agricultural Society, the Dalbeattie Agricultural Society, and the Gatehouse District Agricultural Society.

Secretary—R. Ian Hewat, B.L., Union Bank Buildings, Castle Douglas.

Granted 1939. (Grants in abeyance 1940-46—on account of the war.) (Not awarded 1948.)

* The Show of this Society falls to be held within the area comprising the Perth Show Division. Under Regulation 7, should this Society hold its Show within the three months immediately preceding the date of the "Royal Highland" Show at Dundee (21st-24th June 1949), the entire Grant to the Society will be automatically cancelled.

21. **STONEHOUSE AGRICULTURAL SOCIETY.**

Convener—William Wilson, Udston Farm, Stonehouse, Lanarkshire.

Secretary—David Clark, 21 Commongreen, Stonehouse.

Granted 1938. (Grants in abeyance 1940-47—on account of the war.)

22. **STRATHBOGIE FARMER CLUB.**

Convener—R. J. J. Anderson, Nether Aucharnie, Forgue, Aberdeenshire.

Joint Secretaries—James Ogilvie and A. S. Wilson, Commercial Bank Buildings, Huntly.

Granted 1938. (Grants in abeyance 1940-48—on account of the war.)

23. **UNITED EAST LOTHIAN AGRICULTURAL SOCIETY.**

Convener—James Mitchell, Bonnington, North Berwick.

Secretaries—Stirling & Burnet, Solicitors, Haddington.

Granted 1940. (Grants in abeyance 1940-45—on account of the war.)

24. **WEST TEVIOTDALE AGRICULTURAL SOCIETY.**

Convener—James W. P. Amos, Northhouse, Hawick.

Joint Secretaries—W. R. Kirkpatrick and R. E. Grieve, Royal Bank Buildings, Hawick.

Granted 1946.

25.***WESTERN DISTRICT OF FIFE AGRICULTURAL SOCIETY.**

Convener

Secretary—James G. Pollock, 17 Charles Street, Dunfermline.

Granted 1946.

3rd (Alternate) Year—GRANT OF £15.26.***ANGUS HORSE BREEDERS' ASSOCIATION.**

Convener—Walter R. Findlay, Legaston, Friockheim, Arbroath.

Secretary—S. M'Gill, The National Bank of Scotland Ltd., Forfar.

Granted 1947.

27. **ARDOCH AGRICULTURAL SOCIETY.**

Convener—Charles Robertson, Jun., Berrydyke, Braco.

Secretary—M. Walker, 2 M'Laren Terrace, St Ninians, Stirling.

Granted 1947.

28. **ARRAN FARMERS' SOCIETY.**

Convener—James J. Morton, Machrie Farm, Isle of Arran.

Secretary—Kenneth D. Hamilton, Ardlui, King's Cross, Arran.

Granted 1947.

29. **KENNETHMONT AGRICULTURAL ASSOCIATION.**

Convener—Alexander Anderson, Percylieu, Clatt, Kennethmont, Aberdeenshire.

Secretary—William Henderson, Ardmore Villa, Kennethmont.

Granted 1939. (Grants in abeyance 1940-48—on account of the war.)

30. **KIRRIEMUIR DISTRICT AGRICULTURAL ASSOCIATION.**
Convener—Edward Weighton, Caddam, Kirriemuir.
Secretary—William M. Wallace, National Bank of Scotland Ltd., Kirriemuir.
 Granted 1947.

31. **LORN AGRICULTURAL SOCIETY.**
Convener—John Baird, Caolasnacone, Kinlochleven.
Secretary—A. Fleming, National Bank Buildings, Oban.
 Granted 1939. (Grants in abeyance 1939-46—on account of the war.)

32. **NEWTOWN ST BOSWELLS AND DISTRICT FARMERS' CLUB.**
Convener—Robert H. Allan, Smailholm Mains, Kelso.
Joint Secretaries—Major D. Burns, O.B.E., M.C., and Peter Rutherford, The British Linen Bank Buildings, Newtown St Boswells.
 Granted 1947.

33. **SOUTH UIST AND BENBEOULA CATTLE SHOW SOCIETY.**
Convener—.....
Secretary—P. R. M'Intyre, Bulard, Kilphedar, Isle of South Uist.
 Granted 1947. (Not awarded 1948.)

34. **UPPER DEESIDE AGRICULTURAL ASSOCIATION.**
Convener—Charles A. Ferries, West Learney, Torphins.
Secretary—William Kemp, Bank House, Torphins, Aberdeenshire.
 Granted 1939. (Grants in abeyance 1940-48—on account of the war.)

35. **UPPER DONSIDER AGRICULTURAL SOCIETY.**
Convener—Robert Keir, Kinbattoch, Glenkindie, Aberdeenshire.
Secretary—John Strachan, Milton, Glenkindie, Aberdeenshire.
 Granted 1946. (No Show 1948.)

- 2nd (Intermediate) Year—3 SILVER MEDALS.**

36. **BERWICKSHIRE AGRICULTURAL ASSOCIATION.**
Convener—R. Forrest, Preston, Duns.
Secretary—B. Wedgewood, Main Hill, Duns.
 Granted 1948.

37. **CARRICK FARMERS' SOCIETY.**
Convener—J. D. Hastings Forbes, Jameston, Maidens.
Secretary—John R. Hunter, Greenlea, Maybole.
 Granted 1948.

38. **NITHSDALE AGRICULTURAL SOCIETY.**
Convener—Joseph Kirkpatrick, Auchembainzie, Thornhill.
Secretary—W. M. Henderson, Solicitor, Thornhill.
 Granted 1948.

39. NORTH UIST AGRICULTURAL SOCIETY.

Convener—D. Macmillan, B.L., Ostrom House, Lochmaddy.*Secretary*—Kenneth Macleod, J.P., Dunskeellar Schoolhouse, Sollas, Lochmaddy.

Granted 1948.

40. PEEBLESSHIRE AGRICULTURAL SOCIETY.

Convener—James Smellie, Cardrona, Mains, Peebles.*Joint Secretaries*—James Stewart, Caberston, Walkerburn, and Robert Robertson, 60 Tweedholm Avenue, Walkerburn.

Granted 1948.

41. WHITBURN AGRICULTURAL SOCIETY.

Convener—James G. Sibbald, J.P., Hardhill, Bathgate.*Secretary*—Peter A. Simpson, J.P., Commercial Bank House, Whitburn.

Granted 1948.

1st Year—GRANT OF £15.

42. LARGS AGRICULTURAL SOCIETY.

Convener—James Parker, Millrig Farm, Skelmorlie.*Secretary*—James M. Paterson, 19 Bath Street, Largs.

Granted 1949.

CLASS 2.

HORSE ASSOCIATIONS—GRANTS OF £20 IN RESPECT OF STALLIONS ENGAGED FOR AGRICULTURAL PURPOSES.

REGULATIONS, 1949.

1. The Royal Highland and Agricultural Society will make Grants to Horse Associations and other Societies in different districts engaging Stallions for agricultural purposes. The total sum expended by The Royal Highland and Agricultural Society in such Grants shall not exceed the sum of £210 in any one year.

2. All applications must be at the instance of a Horse Association. Either the Convener or the Secretary must be a member of The Royal Highland and Agricultural Society of Scotland.

3. *Application of Grant.*—The portion of the Grant to any one Association or Society shall not exceed the sum of £20 in any one year. It is intended that the Grant shall be used by the Association or Society for the purpose of enabling it to secure a better class of Stallion.

4. *Duration of Grant.*—The Grant will continue for three consecutive years.

5. *Registration of Stallions.*—The Grants will be available only for Stallions which, for the years to which the Grants apply, are

registered in the Register of Certified Draught Stallions published by the Department of Agriculture for Scotland. (For information regarding the Registration of Stallions, apply to the Secretary of the Department of Agriculture for Scotland, St Andrew's House, Edinburgh.)

6. *Engagement of Stallions.*—In the event of a Horse not being engaged in any one year while the provisions of the Grant are in force, the Grant made by The Royal Highland and Agricultural Society will cease.

7. *Report to be Submitted.*—Forms of Report will be furnished to the Secretaries. Full details, as required, must be given and the completed Reports, duly signed and certified, must be lodged with the Secretary of The Royal Highland and Agricultural Society as soon as possible, and in no case later than 1st November. These Reports are subject to the approval of the Directors of The Royal Highland and Agricultural Society, against whose decision there shall be no appeal. The Grant will lapse if no Report is lodged by the due date.

8. *Payment of Grant.*—Grants will be paid in December after the Reports have been received and found to be in order and passed by the Board of Directors.

9. *Renewal of Grant.*—An Association or Society which has received a Grant shall not be eligible to apply for a renewal of the Grant until after the expiry of three years from the termination of the previous Grant. In disposing of applications the Directors of The Royal Highland and Agricultural Society of Scotland shall keep in view the length of interval that has elapsed since making a previous Grant, giving priority to those Associations or Societies which have been longest without a Grant.

Grants in 1949.

3rd and Final Year—GRANT OF £20.

1. ANGUS HORSE BREEDING SOCIETY.

Convener—William J. Reid, Canterland, Laurencekirk.

Secretary—S. M'Gill, The National Bank of Scotland Ltd., Forfar.

Granted 1947.

2. FYVIE AND DISTRICT HORSE BREEDING SOCIETY.

Convener—S. A. Niven, Sunnyside, Rethenorman, Aberdeenshire.

Secretary—Roderick G. Walker, Cuttlecraigs, Inverurie, Aberdeenshire.

Granted 1947.

3. KIRRIEMUIR DISTRICT AGRICULTURAL ASSOCIATION.

Convener—Edward Weighton, Caddam, Kirriemuir.

Secretary—William M. Wallace, The National Bank of Scotland Ltd., Kirriemuir.

Granted 1947.

4. STIRLING AND ALLOA HORSE BREEDING SOCIETY.

Convener—.....*Secretary*—William Muirhead, Foot o' Green, Stirling.
Granted 1947.

2nd Year—GRANT OF £20.

5. DEESIDE STOCK IMPROVEMENT SOCIETY.

Convener—William Robertson, Wardend, Durris.*Secretary*—Peter Ross, 15 Westfield Road, Stonehaven.
Granted 1948.

6. EAST LOTHIAN CLYDESDALE HORSE BREEDING SOCIETY.

Convener—James Mitchell of Bonnington, North Berwick.*Secretaries*—Stirling & Burnet, Solicitors, Court Street,
Haddington.

Granted 1948.

7. UPPER NITHSDALE HORSE SOCIETY.

Convener—G. G. Johnstone, Dabton, Thornhill.*Secretary*—W. M. Henderson, Solicitor, Thornhill.
Granted 1948.

1st Year—GRANT OF £20.

8. UNITED BANFFSHIRE AGRICULTURAL SOCIETY.

Convener—John C. H. Addison, Gerriesfield, Banff.*Secretary*—Norman J. B. Shepherd, M.A., LL.B., 40 Low
Street, Banff.

Granted 1949.

9. VALE OF ALFORD HORSE BREEDING SOCIETY.

Convener—James Mitchell, Midmill, Alford.*Secretary*—Henry G. Murray, Muir Farm, Alford.
Granted 1949.

CLASS 3.

LOCAL AGRICULTURAL SOCIETIES—GRANTS OF
SILVER MEDALS IN AID OF PREMIUMS.

REGULATIONS, 1949.

The Society, being anxious to co-operate with local Societies, will give a limited number of Silver Medals annually to Societies (but not concurrently if also in receipt of a Grant under Class 1), in addition to the Money Premiums offered by them, for—

1. Best Bull, Cow, or Heifer of any pure breed specified in Class 1.
2. Best Stallion or Mare of any pure breed specified in Class 1.

3. Best Tup or Pen of Ewes of any pure breed specified in Class 1.
4. Best Boar, Sow, or Breeding Pig of any pure breed.
5. Best Pens of Poultry.
6. Best Sample of any variety of Wool.
7. Best Sample of any variety of Seeds.
8. Best-managed Farm.
9. Best-managed Green Crop.
10. Best-managed Hay Crop.
11. Best-managed Dairy.
12. Best Sweet-Milk Cheese.
13. Best Cured Butter.
14. Best Fresh Butter.
15. Best Collection of Roots.
16. Best-kept Fences.
17. Best Sheep-Shearer.
18. Most expert Hedge-Cutter.
19. Most expert Labourer at Draining.
20. Best Maker of Oatcakes.

It is left to the local Society to choose out of the foregoing list the classes to which the Medals are to be allocated.

RULES OF COMPETITION.

1. All Competitions must be at the instance of a local Society.
2. The classes for which Medals are granted must be in accordance with the foregoing list. The local Committee shall select the classes, and specify them in the Report.
3. The offer of the Medals must be announced in the Premium List and Catalogue of the Show as "presented by The Royal Highland and Agricultural Society of Scotland."
4. The Medals are granted for two years, and lapse if not awarded in those years.
5. No Society shall receive more than two Medals in any year.
6. A Committee of Management shall be appointed, and either the Convener of the Committee or the Secretary of the Society must be a member of The Royal Highland and Agricultural Society of Scotland.
7. When it is agreed to hold the General Show of the Society in any one of the Show Divisions, no local Society may hold a Show within that Division in the three months immediately preceding the date of the General Show. In the event of a Show being held, the entire Grant will be cancelled.
8. The Money Premiums given in the District must be not less than £2 for each Medal offered.
9. The Medal for Sheep-Shearing shall always accompany the highest Money Premium.
10. There must not be fewer than three competitors in all the classes.
11. Regarding Reports and despatch of Medals, Rules 10 and 11, Class 1, will apply.
12. When a grant of Medals has expired, a Society can only apply again for Medals after the lapse of a period of two years.

Grants in 1949.

2nd Year.

1. SOUTH RONALDSHAY AND BURRAY AGRICULTURAL SOCIETY.
Convener—George Barclay, West End House, St Margaret's Hope, Orkney.
Secretary—W. L. M'K. Thomson, Old Bank House, St Margaret's Hope, Orkney.
 Granted 1948.

1st Year.

- 2.*NORTH OF FIFE FOAL SHOW SOCIETY.
Convener—James R. Adamson of Bruckley, Dairsie.
Secretary—John Lang, Hayston, Leuchars.
 Granted 1949.
3. STRATHEARN AGRICULTURAL SOCIETY.
Convener—Duncan M. Stewart of Millhills, Crieff.
Secretary—J. D. S. Miller, 14 Comrie Street, Crieff.
 Granted 1949.

CLASS 4.

SPECIAL GRANTS—1949.

(1) ANNUAL.

1. SCOTTISH ALLOTMENTS AND GARDENS SOCIETY.
 £15 and 15 Medium Silver Medals to be offered as Prizes for best Allotments.
Secretary and Treasurer—William S. M'William, 48 Edgehill Road, Glasgow, W.1.
 Granted 1927.

(2) IN ALTERNATE YEARS.—GRANTS OF £3 IN 1949.

£3 to each Society, to be competed for at the Annual Shows.

1. EAST MAINLAND AGRICULTURAL SOCIETY, ORKNEY.
Convener—William G. Smith, Hall of Tankerness, Tankerness, Orkney.
Secretary—Alfred C. Tait, Quoykea, Toab, Kirkwall.
 Granted 1898.
2. WEST MAINLAND AGRICULTURAL SOCIETY, ORKNEY.
Convener—Robert Learmonth, Saithes, Dounby, Orkney.
Secretary—George T. Wylie, Swartland, Twatt, Kirkwall, Orkney.

Granted 1900.

* See Footnote on page 73.

3. **SANDAY AGRICULTURAL ASSOCIATION, ORKNEY.**
Convener—W. Cowper Ward, Sear House, Sanday, Orkney.
Secretary—John Thomson, Ortis, Sanday, Orkney.
 Granted 1902.
 4. **YELL AGRICULTURAL SOCIETY, SHETLAND.**
Convener—T. R. Manson, Ladybank, West Sandwick, Lerwick.
Secretary—Robert Johnson, The Mause, West Sandwick, Lerwick.
 Granted 1931.
- (3) **IN ALTERNATE YEARS.—GRANTS IN ABEYANCE IN 1949.**
5. **ORKNEY AGRICULTURAL SOCIETY.**
Convener—William G. Smith, Hall of Tankerness, Tankerness, Orkney.
Secretary—M. Hutchison, 5 Broad Street, Kirkwall.
 Granted 1883.
 6. **ROUSAY AGRICULTURAL SOCIETY, ORKNEY.**
Convener—Robert Mainland, Nearhouse, Rousay.
Secretary—Ronald Shearer, Curquoy, Rousay, Orkney.
 Granted 1903.
 7. **SHAPANSEY AGRICULTURAL ASSOCIATION, ORKNEY.**
Convener—William T. Wood, Balfour Mains, Shapansey, Orkney.
Secretary—D. L. Kemp, Bayview, Shapansey, Orkney.
 Granted 1934.
 8. **SOUTH RONALDSHAY AND BURRAY AGRICULTURAL SOCIETY, ORKNEY.**
Convener—David R. Duncan, "Flaws," South Parish, South Ronaldshay.
Secretary—W. L. M'K. Thomson, Old Bank House, St Margaret's Hope, Orkney.
 Granted 1904.

CLASS 5.

FEDERATIONS OF SCOTTISH WOMEN'S RURAL INSTITUTES—GRANTS OF £10.

REGULATIONS, 1949.

1. The Royal Highland and Agricultural Society of Scotland will provide annually a sum not exceeding £150 as special Grants to Federations of Scottish Women's Rural Institutes.

2. *Grant to Federation.* £10.—The amount of the Grant to any one Federation shall not exceed the sum of £10 per annum.

3. *Duration of Grant.*—The Grant will continue for two consecutive years.

4. *Disposal of Applications.*—In disposing of applications for Grants, the Directors of The Royal Highland and Agricultural Society shall keep in view the length of interval that has elapsed since the expiration of the last Grant, giving priority to those Federations which have been longest off the list.

5. *Eligibility to Apply.*—All applications must be at the instance of a properly constituted Federation of Institutes.

6. *Application of Grant.*—The Grant of £10 shall not be applied as a Grant-in-aid to the general funds of a Federation, but must be offered in the form of Prizes at any Show or Competition held under the auspices of the Federation.

7. *Announcement of Grant.*—The offer of Prizes must be announced in the Prize List or Catalogue of the Show or Competition as “presented by The Royal Highland and Agricultural Society of Scotland,” or the amount of the Grant must be shown as a separate item of donation in the published statement of Accounts.

8. *Rules of Competition.*—The Rules of Competition for the Prizes, the funds for which are derived from Grants of The Royal Highland and Agricultural Society of Scotland, shall be such as are generally enforced in the case of Prizes offered from the Federation's own funds.

9. *Report to be Submitted.*—Forms of Report will be furnished to the Secretaries of Federations, and these must be completed and returned to the Society as soon as possible after the Show or Competition and in no case later than 1st November. These Reports are subject to the approval of the Directors of The Royal Highland and Agricultural Society, against whose decision there shall be no appeal. All Reports must be signed and certified as marked on the Form.

The Grant will lapse if no Report is lodged.

10. *Payment of Grant.*—Payment of the Grant will be made in December after the Reports of the Awards have been received and found to be in order and passed by the Board of Directors.

11. *Renewal of Grant.*—A Federation which has received a Grant for two consecutive years shall not be eligible to apply for a renewal of the Grant until after the expiry of two years from the termination of the previous Grant.

Grants in 1949.

2nd Year.

1. ARRAN FEDERATION.

Convener—Mrs Mary Stewart Orr, Corrie House, Corrie, Isle of Arran.

Secretary—Miss Margaret H. S. Jenkins, The Craggs, Blackwaterfoot, Isle of Arran.

Granted 1948.

2. CAITHNESS FEDERATION.

Convener—Mrs A. M. Millikin, Thorwick, Wick.

Secretaries—Miss Doull, Quatre Bras, Lybster; Miss M'Kenzie, Westfield, Thurso.

Granted 1948.

3. STIRLING AND WEST PERTHSHIRE.

Convener—Mrs D. S. Innes, Gartaneaglais, Killearn.

Secretary—Mrs R. Sinclair, Lochview, Killearn.

Granted 1948.

1st Year.

4. ORKNEY FEDERATION.

Convener—Mrs Moar, Schoolhouse, Stenness, Orkney.

Secretary—Mrs Firth, Tankerness Schoolhouse, Orkney.

Granted 1949.

5. PEEBLES FEDERATION.

Convener—Miss H. Tudhope, Broughton Place Farm,
Broughton.

Secretary—Mrs J. M. West, 27 Rosetta Road, Peebles.

Granted 1949.

6. WIGTOWNSHIRE FEDERATION.

Convener—The Hon. Lady MacTaggart Stewart, Ardwell
House, Ardwell.

Secretary—Mrs Barbara M. Joad, Lochryan, Stair Drive,
Stranraer.

Granted 1949.

GROUP III.—COTTAGES AND GARDENS, &c.

The following Premiums are offered for Competition.
The Premiums are granted for two years.

CLASS 6.

LOCAL SOCIETIES, &c.—GRANTS FOR BEST-KEPT COTTAGES AND GARDENS.

1. Best-kept Cottage	£1	0	0
Second best	0	10	0
2. Best-kept Cottage Garden	1	0	0
Second best	0	10	0

Forms of application may be obtained from the Secretary, and should be completed and returned on or before 1st November next, in respect of a Grant commencing in the following year.

RULES OF COMPETITION.

1. Competitions may take place in the different parishes for Cottages and Gardens, or for either separately.

2. The occupiers of Lodges at Gentlemen's Approach Gates and Gardeners' Houses are excluded, as well as others whom the Committee consider, from their position, not to be entitled to compete. The inspection must be completed by the 1st of October. In making the inspection, the Conveners may take the assistance of any competent judges.

3. It shall be left to the Committee in the District to fix two grades of Cottages, with maximum rents of £10 and £16 respectively, and to apply for Grants of £3 in respect of each.

4. To warrant the award of full Premiums, there must not be fewer than three Competitors in each class. If there are less than three Competitors in each class, only half Premium will be awarded.

5. A person who has gained the highest Premium cannot compete again.

6. If the Cottage is occupied by the proprietor, the roof must be in good repair; if the roof is thatch, it must be in good repair, though in the occupation of a tenant. The interior and external conveniences must be clean and orderly; the windows must be free of broken glass, clean, and affording the means of ventilation. Dunghills, and all other nuisances, must be removed from the front and gables. In awarding the Cottage Premiums, preference will be given to Competitors who, in addition to the above requisites, have displayed

the greatest taste in ornamenting the exterior of their houses, and the ground in front and at the gables.

7. In estimating the claims for the Garden Premiums, the judges should have in view—the sufficiency and neatness of the fences and walks: the cleanness of the ground; the quality and choice of the crops; and the general productiveness of the Garden.

8. Reports, stating the number of Competitors, the names of successful parties, and the nature of the exertions which have been made by them, must be lodged with the Secretary of The Royal Highland and Agricultural Society *on or before 1st November next*.

9. When a grant of Money has expired, the District cannot apply again for aid for four years.

CLASS 7.

LOCAL SOCIETIES, &c.—GRANTS OF MINOR SILVER MEDALS FOR BEST-KEPT COTTAGES AND GARDENS, GARDEN PRODUCE, POULTRY, AND HONEY.

RULES OF COMPETITION.

1. The Society will give annually one or two Minor Silver Medals to a limited number of local Associations or individuals, who establish Competitions and Premiums for Cottages, Gardens, Garden Produce, or Bee-Keeping. The Medals will be granted for two years.

2. The Medals may be offered in any two of the following sections, *but under no circumstances will the two Medals be given in one of the sections* :—

- (1) Best-kept Cottage or best-kept Cottage and Garden. (One Medal only.)
- (2) Best-kept Garden. (One Medal only.)
- (3) Best Collection of Garden Produce—Flowers excluded. (One Medal only.)
- (4) Best Pen of Poultry. (One Medal only.)
- (5) Honey. (One Medal only.)

3. The annual value of each Cottage, with the ground occupied in the parish by a Competitor, must not exceed £20. The occupiers of Lodges at Gentlemen's Approach Gates, and Gardeners in the employment of others, are not entitled to compete.

4. If Competition takes place for Garden Produce, such produce must be *bona fide* grown in the Exhibitor's Garden. He will not be allowed to make up a collection from any other Garden. The produce must consist of Vegetables, or Vegetables and Fruit (not Fruit alone). Flowers are excluded.

5. The Honey must be the produce of the Exhibitor's own Hives.

6. To warrant the award of a Medal, there must not be fewer than three Competitors.

7. Forms of Report of Competitions will be furnished to the Secretaries in the different Districts. These must, in all details,

be completed and lodged with the Secretary of The Royal Highland and Agricultural Society as soon as possible after the Competition, and in no case later than *1st November*, for the approval of the Directors, against whose decisions there shall be no appeal.

8. If no Competition takes place in a District for two years the grant expires.

9. When a grant of Medals has expired, the District cannot apply again for a similar grant until after the lapse of a period of two years.

Grants in 1949.

2nd Year.

1. COLINSBURGH AND KILCONQUHAR HORTICULTURAL ASSOCIATION.

Convener—
Secretary—T. A. N. Tasker, Commercial Bank Buildings,
 Colinsburgh.

Granted 1948.

1st Year.

2. TARVES GARDENING SCHEME.

Convener—Mrs Mary Mackie, North Ythsie, Tarves.
Secretary—Charles R. M'Pherson, Schoolhouse, Tarves.

Granted 1949.

GROUP IV.—PLOUGHING, HOEING, AND LONG EARM SERVICE

1. MEDALS FOR PLOUGHING COMPETITIONS.

The Ploughing Medal will be given to the winner of the first Premium at Horse and Tractor Ploughing Competitions, provided Reports in the following terms on the official forms are made to the Secretary, within one month of the Competition, by a Member of the Society. Forms of Report to be had on application.

HORSE PLOUGHING.

FORM OF REPORT.

I, _____ of _____, Member of The Royal Highland and Agricultural Society, hereby certify that I attended the Ploughing Match of the _____ Association at _____ in the county of _____ on the _____ when Horse ploughs competed; _____ of land were assigned to each, and _____ hours were allowed for the execution of the work. The sum of £ _____ was awarded as follows :—

[Here enumerate the names and designations of successful Competitors.]

RULES OF COMPETITION.

1. All Matches must be at the instance of a local Society or Ploughing Association, and no Match at the instance of an individual, or confined to the tenants of one estate, will be recognised.

2. The title of such Society or Association, together with the name and address of its Secretary, must be registered with the Secretary of The Royal Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, Edinburgh.

3. Not more than one Match in the same season can take place within the bounds of the same Society or Association.

4. All Reports must be lodged within one month of the date of the Match, and certified by a Member of The Royal Highland and Agricultural Society who was present at it.

5. A Member can report only one Match; and a Ploughman cannot carry more than three Medals in the same season.

6. To warrant the grant of the Medal, there must have been 12 Ploughs in actual competition for the Medal (*i.e.*, in the particular class for which the Medal was offered) and not less than £3 awarded in Prizes by the local Society. The Medal to be given to the winner of the first prize.

7. The local Society or Ploughing Association shall decide what class of ploughs shall compete for the Medal, and if so agreed, may offer it for competition to the class of plough most generally in use in the district.

8. The local Society or Committee may, if they desire, arrange to let each Ploughman have one person to guide the horses for the first two and the last two furrows, but in no case shall Ploughmen receive any other assistance, and their work must not be set up or touched by others. Attention should be given to the firmness and sufficiency of the work below, more than to its neatness above the surface.

9. The local Committee is required to fix the time to be allowed for ploughing the portion of land, and they are recommended that the time be at the rate of not more than fourteen hours per imperial acre on light land, and eighteen hours on heavy or stony land.

TRACTOR PLOUGHING.

FORM OF REPORT.

I, _____ of _____, Member of The Royal Highland and Agricultural Society, hereby certify that I attended the Ploughing Match of the _____ Association at _____ in the county of _____ on the _____ when Tractor ploughs competed ; _____ of land were assigned to each, and _____ hours were allowed for the execution of the work. The sum of £ _____ was awarded as follows :—

[Here enumerate the names and designations of successful Competitors.]

RULES OF COMPETITION.

1-7. Rules for Horse Ploughing apply.

8. Attention should be given to the firmness and sufficiency of the work below, more than to its neatness above the surface.

9. The local Committee is required to fix the time to be allowed for ploughing the portion of land, and they are recommended that the time be at the rate of not more than seven hours per imperial acre on light land, and nine hours on heavy or stony land.

NOTE.—The attention of the Directors of the Society has frequently been drawn to certain irregularities which have occurred in connection with the conduct of Ploughing Matches and the completion of the Reports thereon. Complaints have been made (a) that the allotted amount of ground has not been ploughed, within the specified time, by the competitor awarded the first prize ; (b) that the Report sent to this Society has been signed by a Member of the Society who was not present at the Match. It has to be pointed out that any infringement of the above Rules by a local Society or Ploughing Association will render that Society or Association liable, at the discretion of the Board of Directors, to be debarred from receiving the Society's Medals.

2. MEDALS FOR HOEING COMPETITIONS.

The Minor Silver Medal will be given to the winner of the first Premium at Hoeing Competitions, provided a Report on the official form is made to the Secretary within a month of the Competition by a Member of the Society. Forms of Report to be had on application.

RULES OF COMPETITION.

1. All Matches must be at the instance of a local Society or Hoeing Association, and no Match at the instance of an individual, or confined to the tenants of one estate, will be recognised.

2. The title of such Society or Association, together with the name and address of its Secretary, must be registered with the Secretary of The Royal Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, Edinburgh.

3. Not more than one Match in the same season can take place within the bounds of the same Society or Association.

4. All Reports must be lodged within one month of the date of the Match, and certified by a Member of The Royal Highland and Agricultural Society who was present at it.

5. A Member can only report one Match: and same Competitor cannot carry more than three Medals in the same season.

6. To warrant the grant of the Medal there must have been twelve hoes in competition, and not less than Three Pounds awarded in prizes by the local Society or Association. The Medal to be given to the winner of the first prize.

7. The time to be allowed to be decided by the local Committee, but in no case to exceed two hours for two drills of 100 yards each, the third drill being unoccupied, so that Competitors do not interfere with their neighbour's work.

8. Competitors must finish their work as they go along—no turning back or after-dressing allowed. Hand-picking or transplanting shall be strictly prohibited.

9. A Committee shall be appointed to watch the work, and any Competitor found transplanting or otherwise not complying with the Rules shall have his number withdrawn, and be debarred from receiving any prize which might otherwise have been awarded to him.

NOTE.—Medals will be awarded under similar conditions for Competitions in hand-singling.

3. CERTIFICATES AND MEDALS FOR LONG FARM SERVICE.

Certificates and Silver Medals for long service will be awarded by the Society to farm servants, male or female, having an approved service

in Scotland of not less than thirty years (not necessarily continuous) —(a) with one employer on the same or different holdings ; (b) on the same holding with different employers.

Special Certificates and Silver Gilt Medals are also awarded to farm servants, male or female, having an approved service in Scotland of not less than forty-five years (not necessarily continuous), on similar conditions of employment as the above.

Forms of Application are obtainable from the Secretary, 8 Eglinton Crescent, Edinburgh.

War Service to count towards the time required for qualification, where farm servants have returned to same service or employment with same farmer or his family.

The award is strictly confined to workers, such as Ploughmen, Cattlemen, and Shepherds.

Domestic and House Servants and Estate workers, such as Foresters, Carters, Grooms, &c., are not eligible.

Awards in 1948.

The following received the Special Certificate and Silver Gilt Medal for service of forty-five years and over :—

Alexander, John, Logan Mains, Ardwell.
 Alexander, Mrs Margaret, Logan Mains, Ardwell.
 Allan, William Blair, Cranshaws Farm, Duns.
 Campbell, John, Kenmuir Farm, Tollcross.
 Connell, Daniel, Kildavanan Cottages, Bute.
 Duncan, William, Inchstelly, Alves, Forres.
 Hastie, Peter, 19 West Port, Dunbar.
 Johnston, Alexander M. F., North Seatter, Melsetter, Orkney.
 Kelly, Helen Bell, Easter Langlee, Galashiels.
 Kelly, Robert, Easter Langlee, Galashiels.
 MacKenzie, Donald, Udale, Poyntzfield, Conon Bridge.
 MacLean, Roderick, Davidston Farm, Cromarty.
 Meredith, William B., Bassendean, Gordon.
 Milne, William S., North Lodge, Straloch, New Machar.
 Rae, John, Braicklie, Ballater.
 Ritchie, James, North Gyle, Corstorphine.
 Shaw, Alexander, Hillhead, Forres.

The following received the Silver Medal and Certificate for service of from thirty to forty-four years :—

Aiton, Elizabeth, Swinton, Duns.
 Anderson, Robert Welsh, Whitestone Knowe, Peebles.
 Bennie, Matthew, Dalpatrick, Crieff.

Borthwick, William, Glespin, Crawfordjohn.
 Burnett, Alexander Fletcher, Bonnington, Peebles.
 Campbell, Kenneth, Kedlock, Cupar, Fife.
 Carson, William, Caigton Hill, Castle Douglas.
 Christie, John, Davidston Farm, Cromarty.
 Corrie, Maggie Jane, Fostermeadow, Ruthwell, Dumfries.
 Cumming, Andrew, Inverlever, Ford, Lochgilphead.
 Davidson, Duncan F., Candacraig Cottages, Roughpark, Strath-
 don.
 Dickson, Archibald, Brockieside, Kilsyth.
 Elliot, Thomas, Shaws, Newcastleton.
 Fraser, Duncan, 31 Bank Street, Cromarty.
 Gillies, Donald, Finchairn, Ford, Lochgilphead.
 Gordon, John, Fordie, Comrie.
 Hastie, David T., 23 Countess Road, Dunbar.
 Hiddleston, John, Fellend, Ringford, Castle Douglas.
 Hiddleston, William W., Gateslack Cottage, Thornhill.
 Hunter, James Wilson, Banks, Kirkeudbright.
 Hutchison, John, Dabbystyle, Balmedie.
 Jackson, James, Clerkhill, Grains, Dumfriesshire.
 Kerr, William, Crairieknowe Cottage, Thornhill.
 Kirk, John, Fallsidehill, Hume, Kelso.
 Kirk, Robert, Fallsidehill, Hume, Kelso.
 Lothian, James, Hynelsidehill, Gordon.
 M'Clure, Miss Mary Ann, Templandhill, Kirkmahoe.
 Macdonald, David, Davidston Farm, Cromarty.
 MacDonald, William, Charleston, North Kessock.
 M'Gregor, William, Kerchesters, Kelso.
 M'Guffie, William, Gavinburn, Old Kilpatrick.
 M'Intosh, Hugh, Viewhill Cottage, Gollanfield.
 MacIntyre, Hugh, Outerwards, Largs.
 M'Kellar, Alexander, Townhead Farm, Helensburgh.
 M'Kellar, Hector, Townhead Farm, Helensburgh.
 MacKenzie, John, Braevail, Lethen.
 M'Lean, John, Dalmore, Knipoch, by Oban.
 MacLeod, Roderick M'K., Clynmilton, Brora.
 M'Nab, George, Amour's Cottages, Cramond Bridge, Edinburgh.
 Mair, Miss Isabella, Knockdon, Maybole.
 Matheson, Donald, Navity Farm, Cromarty.
 Mayes, Andrew, Kipps, Kingsbarns.
 Mitchell, Wallace, Mid Duloch, Dunfermline.
 Moffat, James, Jerviswood, Lanark.
 Moffat, Walter, Loubconich, Oykel, by Lairg.
 Monteith, Samuel, Lennox Plunton, Kirkeudbright.
 Munro, William, 23 High Street, Cromarty.
 Murray, Laurence, Bonnington, Peebles.
 Nichol, Archibald A., Corehead, Moffat.
 Page, William, East Dron, Bridge of Earn.
 Rendall, James, Gogar Mains, Edinburgh 12.
 Riddick, John, Whitehill Farm, Kirkmahoe.
 Ritchie, Archibald, North Faulds, Lanark.
 Robertson, Donald, Ness of Sound Farm, Lerwick.
 Scott, Elizabeth, New Cove Farm, Cockburnspath.
 Sinclair, Robert, St Mungo's Cottage, Gleneagles.

Smith, Alexander, Gallin, Glenlyon, Aberfeldy.
Smith, Samuel, Greenhead, Thornhill.
Somerville, Archibald, West Edge Cottages, Gilmerton.
Steel, Margaret M., "Hayfield," Kirkpatrick-Fleming.
Storie, Robert, Mellerstain, Gordon.
Taylor, George, Woodside, Dunninald, Montrose.
Thomson, Alexander, Logie-Newton, Rothienorman.
Thomson, Andrew J., Marypark, Baltasound, Lerwick.
Thomson, Thomas, Holmfield, Kirkintilloch.
Thorburn, Alexander, Awhirk, Stranraer.
Turner, James, Morham Mains, Haddington.
Wallace, Thomas, Whiteside, Monkton.
White, Duncan M'Iver, Yarrow, Stenton, Dunbar.
Wightman, Georgina K., Townhead, Cockburnspath.
Wilson, James, Peasflat Cottages, Dalkeith.
Wilson, William H., Morebattle, Tofts, Kelso.
Young, John, Rosefarm, Cromarty.
Yourston, George N., Oldcastle, Chirnside.

APPENDIX II.

NOTE.—From 14th to 23rd June all communications for the Secretary should be addressed to him at the Secretary's Office, Showyard, Riverside Park, Dundee.

Address for Telegrams—"SOCIETY," EDINBURGH.

Telephone No.—EDINBURGH 23655.

THE ROYAL HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND

**GENERAL SHOW OF STOCK, IMPLEMENTS,
MACHINERY, ETC.**

DUNDEE

21ST, 22ND, 23RD, AND 24TH JUNE 1949.

LAST DAYS OF ENTRY.

IMPLEMENTS AND OTHER ARTICLES—Monday, 28th February.

NEW IMPLEMENTS—Monday, 28th February.

CATTLE, HORSES, SHEEP, GOATS, AND PIGS—Monday,
4th April.

DAIRY PRODUCE AND RURAL INDUSTRIES—Monday,
4th April.

FLOWER SHOW—Saturday, 16th April.

POULTRY AND RABBITS—Wednesday, 27th April.

HORSE-SHOEING AND SHOE-MAKING COMPETITIONS—Wednes-
day, 27th April.

LIVE STOCK JUDGING COMPETITION—Thursday, 5th May.

HONEY—Thursday, 12th May.

President of the Society.

THE EARL OF ELGIN AND KINCARDINE, K.T., C.M.G.

Chairman of the Board of Directors.

JAMES R. LUMSDEN, C.B.E., OF ARDEN.

Condener of the Local Committee.

THE EARL OF AIRLIE, K.T., G.C.V.O., M.C.

Condener of the Shows Committee.

THOMAS A. WEDDERSPOON, CASTLETON, EASSIE.

The District connected with the Show comprises the Counties of Angus (Western District), Fife, Kinross, and Perth (Perth Show District).

CONTENTS

	PAGE		PAGE
GENERAL CONDITIONS	3	CLASSES— <i>Continued.</i>	
IMPLEMENTS AND OTHER ARTICLES	12	HORSES— <i>Continued.</i>	
FLOWER SHOW	16	Shetland Ponies	44
NEW IMPLEMENTS	16	Jumping Competitions	45
RAILWAY ARRANGEMENTS	18		
CARTAGE CHARGES	21	SHEEP—	
CLASSES.		Blackface	46
CATTLE—		Cheviot	47
Shorthorn	22	North Country Cheviot	47
Aberdeen-Angus	24	Border Leicester	48
Galloway	26	Half-Bred	49
Belted Galloway	27	Oxford Down	49
Highland	28	Suffolk	50
Hereford	29	GOATS	51
Ayrshire	30		
British Friesian	32	PIGS—	
Jersey	34	Large White	53
Fat Cattle	35	Large Black	54
Hill Cattle	36	Wessex Saddleback	54
HORSES—		EXTRA STOCK	55
Clydesdale Males	37	POULTRY	56
Clydesdale Geldings	38	DAIRY PRODUCE	58
Clydesdale Females	39	RABBITS	59
Suffolk	40	HONEY, &c.	60
Percheron	40	RURAL INDUSTRIES	62
Hunters	41	HORSE-SHOEING COMPETITION	64
Riding Ponies	42	SHOE-MAKING COMPETITION	65
Hill Ponies	42	LIVE STOCK JUDGING COM- PETITION	66
Highland and Western Island Ponies	43	ABSTRACT OF PREMIUMS	67

REGULATIONS.

GENERAL CONDITIONS.

1. The Competition, except where otherwise stated in the Premium List, is open to Exhibitors from all parts of Great Britain and Northern Ireland.

2. Every Lot must be intimated by a Certificate of Entry, lodged *Entries.* with the Secretary *not later than Monday, 28th February, for Implements, New Implements, and other Articles; Monday, 4th April, for Stock, Dairy Produce, and Rural Industries; Saturday, 16th April, for Flower Show; Wednesday, 27th April, for Poultry, Rabbits, Horse-shoeing, and Shoe-making; Thursday, 5th May, for Live Stock Judging; Thursday, 12th May, for Honey.* Printed forms of entry will be issued on application to the Secretary, No. 8 Eglinton Crescent, Edinburgh 12. Admission Orders for Exhibits and Attendants will be forwarded to Exhibitors, by post, previous to the Show.

Between 4th April and 2nd May an Exhibitor who has made, in due time, an entry of Horses, Cattle, Sheep, Goats, or Pigs, in a particular class, will be permitted to substitute for it an entry of another animal in the *same class* on payment of a fee of Five Shillings each entry. Such animal must, in terms of Rule 10, be the *bona fide* property of the Exhibitor at the original date of closing of entries. *Substitution of Entry in same Class.*

Cattle of the Ayrshire, British Friesian, and Jersey breeds entered at the Society's Shows must be from attested herds. All other Cattle must be from attested herds, licensed tuberculin-tested herds, or supervised herds, or must have passed a recognised tuberculin test after 17th May 1949. *Attested Herds and Grade 'A' (T.T.) Herds.*

Entries of animals from attested or supervised herds must be accompanied by permits obtained from the Divisional Inspector of the Ministry of Agriculture for the area from which the animals are to be moved. Entries of animals from tuberculin-tested herds must be accompanied by a certificate from the Licensing Authority. In the case of other animals Certificates that they have passed a recognised tuberculin test after 17th May must be forwarded to the Secretary as soon as the test is completed, and not later than 14th June 1949.

Cattle from attested herds and from licensed tuberculin-tested herds are housed separately, in accordance with Government Regulations, and particulars must be given on the Entry Form. In the event of any licence being issued or revoked after the date of entry, intimation must be made immediately to the Secretary, and in any case not later than 1st June, after which date no change in the housing accommodation can be made.

3. This Premium List is published and the Show will be held subject to any Orders that may be issued by the Ministry of Agriculture or Local Authorities. Any licences that may be required for the movement of Stock into or away from the Show must be obtained by Exhibitors. *Licences for moving Stock.*

**Diseased
Animals.**

4. Animals suffering from any form of infectious or contagious disease—including ringworm or other form of infectious or contagious skin ailment—must not be brought to the Show. Those infringing this Rule shall be liable to a fine of £10, and to have their Stock removed.

**Horses
suffering
from cold.**

The Steward of Horses shall have power to require that any animal showing symptoms of cold be examined by the Veterinary Surgeon, and, if found to be so suffering, the animal shall be isolated or excluded from the Showyard.

**Fees to
accompany
Entries.**

5. No Entry can be received or recorded unless it is accompanied by the necessary fees, and complies fully with the Regulations in the Premium List, the Secretary being empowered to return entries sent without the necessary fees.

**Particu-
lars of
Entries.**

6. The Schedule of Entry must be filled up so far as within the knowledge of the Exhibitor. The Society shall have power at any time to call upon an Exhibitor to furnish proof of the correctness of any statement in his entry.

**Name of
Breeder.**

7. The name of the Breeder, if known, must be given, and if the Breeder is not known, a declaration to that effect, signed by the Exhibitor, must be made on the Entry Schedule, and no pedigree will be entered in the Catalogue when the Breeder is unknown.

**No Substi-
tution of
Animals.**

8. All animals, except calves, foals, and lambs shown with their dams, must be entered in the classes applicable to them, and cannot be withdrawn after entry, or other animals be substituted in their place, except as provided in Rule 2.

**One Class
only.**

9. For Prizes given by the Society, no animal shall be allowed to enter in more than one class, or to compete in any class except that prescribed for animals of its pedigree and description; but this Rule does not apply to the Jumping Classes.

**Owner-
ship.**

10. All stock exhibited at the Show, except where otherwise stated in the Premium List, must be, at the time of entry, the *bona fide* property of the Exhibitor in whose name it is entered.

**Responsi-
bility for
Entries.**

11. Exhibitors are alone responsible for the accuracy and eligibility of their entries. The recording of an entry or the admission of the exhibit to the Showyard will not relieve the Exhibitor of this responsibility. The entry fee paid for an animal entered in a class for which it is not eligible is not returnable.

**Cancelling
of Entries.**

12. In the event of the entries in any section of Cattle, Horses, Sheep, Goats, or Pigs being less in number than an average of three per class, or the number of different Exhibitors in the section being less than three, the classes for that section shall be cancelled automatically for the year and the entry fees returned.

**Society not
liable.**

13. The Society shall not be liable for any loss or damage which Stock, Poultry, Dairy Produce, &c., Implements, or other articles may sustain at the Show, or in transit.

**Disquali-
fied Ex-
hibitors.**

14. The Society reserve to themselves the right of refusing, cancelling, or prohibiting the exhibition of entries from any person who, after 1st January 1904, has been expelled from the membership of any Agricultural or Dairy Society, or who may have been prohibited, suspended, or disqualified from making entries or exhibiting at the Show or Shows of any Agricultural or Dairy Society or Breed Society in consequence of having attempted to obtain a Prize by giving a false Certificate, or by other unfair means, or who is under exclusion from any Breed Society for fraudulent practices.

**Animal
Disquali-
fied.**

15. When an animal has previously been disqualified by the decision of any Agricultural or Breed Society in the United Kingdom, such

disqualification shall attach, if the Exhibitor, being aware of the disqualification, fail to state it, and the grounds thereof, in his entry, to enable the Directors to judge of its validity.

16. Any artificial contrivance or device of any description found on or proved to have been used on an animal, either for preventing the flow of milk or for any other improper purpose, will disqualify that animal from being awarded a Premium, and the Owner of said animal may be prohibited from again entering Stock for any of the Society's General Shows, for such a period as the Directors may see fit.

Tampering with Animals.

17. Horses shall not be blindfolded while being shown in the Ring.

Blindfolding Horses. Rejecting Entries.

18. The Society further reserve to themselves the right of refusing any entries they may think fit to exclude, or to cancel any entry made, or to prohibit the exhibition of any entry.

19. Stock entered for competition, and actually in the Show, is subject to the control and under the orders of the Stewards, Secretary, and other Show officials of the Society, and such stock may not be withdrawn from competition without the consent of the Stewards or Secretary.

Control of Exhibits.

20. Persons making insulting remarks to, or in any way unduly interfering with, the Judges, Stewards, or other officials while in the performance of their duties, and all Exhibitors or others in charge of stock while in the Judging Rings refusing to accept or display tickets, rosettes, &c., awarded by the Judges, and handed to them by the Stewards or other officials, or tearing up tickets, rosettes, &c., so awarded and handed to them, or indulging in any similar conduct, shall be considered guilty of misconduct, and shall be dealt with under these rules. Exhibitors and other persons in charge of stock are prohibited from displaying the name of the Exhibitor or herd name either on guiding sticks or bats, or in any other way, whilst the animals are being judged.

Improper Conduct.

21. All persons in charge of stock or other exhibits, and all persons admitted into the Showyard, shall be subject to the rules of the Society, and shall obey the orders of the Stewards, Secretary, and other officials of the Society. Exhibitors shall be answerable for the conduct of their servants or representatives.

Subject to Orders.

The Stewards and other officials have power to enforce the Regulations of the Society in their different departments.

Power of Officials.

22. A protest having reference to exhibits at the Show may be lodged by any person having interest. Protests having reference to competitions which take place on the first day of the Show must be lodged in writing with the Secretary at his Office in the Showyard not later than 9 A.M. on Wednesday, the second day of the Show, and parties must be in attendance at the Secretary's Office in the Showyard at 9.30 A.M. that day, when protests may be disposed of. Protests relating to competitions taking place after the first day of the Show must be lodged before 5 P.M. on the day on which the particular exhibition takes place. Each protest must state specifically the grounds of objection, and must be accompanied by a deposit of £2, 2s., which deposit may, if the objection be proved frivolous to the satisfaction of the Directors, be forfeited. Protests may be lodged at any time by Directors, and in this case no deposit will be required. Protests will be heard and determined by the Directors. Protests on veterinary grounds not received.

Protests.

23. The violation of any one of the Regulations, or disobedience of the orders of the Directors, Stewards, Secretary, or other officials of the Society, shall render the offending person liable to the forfeiture

Penalties for Offences.

of all Premiums awarded to him, or of such a portion as the Directors may ordain, and also liable to be expelled from the membership of the Society, and disqualified from again, or for a certain number of years, exhibiting at the Shows of the Society, or to have his case disposed of by fine or otherwise as the Directors may determine.

*Final
Authority.*

24. The decision of the Directors shall, in every matter arising at or in connection with the Show, be final; and every person present at the Show, whether as a Judge, Exhibitor, Visitor, or otherwise, shall be deemed thereby to have agreed to refer the subject-matter of such decision to the final determination of the Directors to the exclusion of all Courts of Law.

*Intimat-
ing
Decisions.*

25. All decisions under these Rules may, along with the names and addresses of the persons against whom such decisions have been pronounced, be communicated by the Secretary of this Society to the Secretaries of all Agricultural or Dairy Societies holding open Shows in the United Kingdom, and to the Secretaries of all Breed Societies in the United Kingdom, and may be published in the Annual Reports of this Society, and in such newspapers or journals as the Directors may determine; and every Exhibitor competing at the Show, and every person present at the Show, whether as a Director, Member of Committee, Steward, Judge, Exhibitor, Visitor, or otherwise, shall be deemed thereby to have consented to such communication and publication.

*Former
Winners
as Extra
Stock.*

26. An animal to which a first Premium has been awarded, even if it should not qualify for that Premium, or an animal which subsequently becomes entitled to a first Premium, at a General Show of the Society, cannot again compete in the same class, notwithstanding any alteration in the heights stated for such class, but may be exhibited as Extra Stock (see page 55).

*Herd-
books.*

27. Shorthorn, Aberdeen-Angus, Galloway, Belted Galloway, Highland, Hereford, British Friesian, and Jersey Cattle must be entered in the herd-books—Ayrshire Cattle in the herd-book or any Appendices thereto—or the Exhibitor must produce evidence that his animal is eligible to be entered therein. Dun Galloways entered in the ordinary Galloway Classes must be registered in, or eligible for entry in, the Galloway Cattle Society's herd-book.

*Height of
Horses.*

28. All Horses or Ponies entered in classes in which a particular height is stated shall, before being judged, be measured with their shoes on. No subsequent measuring or alteration of shoes will be permitted. In the case of Highland and Western Island Ponies, these may be measured without shoes, the height limit in such cases being reduced by quarter of an inch.

*Weight of
Shoes.*

29. Exhibitors of Hackney and Harness Horses shall be required to adhere to the Rules and Regulations of the Hackney Horse Society with regard to the weight of shoes on their exhibits, the Society's Veterinary Inspector being instructed to examine all the Hackneys and Harness Horses on the second morning of the Show and see that the following Rules as to the weight of shoes are attended to—viz., (a) For Hackneys exceeding 14 hands (except Hackney yearling colts and Hackney yearling fillies), no shoe (nails included) may exceed 2 lb. in weight; (b) for Ponies not exceeding 14 hands, Hackney yearling colts and Hackney yearling fillies, no shoe (nails included) may exceed 1½ lb. in weight.

*Overfeed-
ing.*

30. Breeding Stock must not be shown in an improper state of fatness, and the Judges are requested not to award Premiums to overfed animals. No Cattle which after the age of twelve months have been

exhibited as Fat Stock at any Show are eligible to compete in the Breeding Classes for the Society's Prizes until one year after being so shown, and then only with calf at foot. No Sheep which after the age of twelve months have been exhibited as Fat Stock at any Show are eligible to compete in the Breeding Classes for the Society's Prizes.

31. Aged Bulls and Stallions must have had produce, and, along with two-year-old Bulls, three-year-old Colts, and two-shear and aged Tups, have served within the twelve months immediately preceding the Show. *Sires.*

32. Except as may be otherwise specially provided in this Premium List, cows of all breeds (other than Ayrshire, British Friesian, and Jersey) must have had a live or full-time calf on or after 1st September of the year preceding the year of the Show, and before the first day of the Show, and when exhibited must be in milk. Cows of the Ayrshire, British Friesian, and Jersey breeds must have had a live or full-time calf within fifteen months previous to the Show. *Calving Cows.*
Animals of any age that have had a calf must be shown as Cows.

33. Two-year-old Heifers of the Shorthorn, Aberdeen-Angus, Galloway, Belted Galloway, Hereford, Ayrshire, and British Friesian breeds, and three-year-old Highland Heifers, must be in calf when exhibited, and the Premiums will be withheld till birth be certified, which must be within nine months after the Show. *In-calf Heifers.*

34. A Mare entered in a class for "Mares with foal at foot" must have produced a foal after 1st January of the year of the Show, must have regularly nursed her own or another foal, and must (except where otherwise provided) have the foal with her in the Show. If the mare's own foal is alive it must be the foal shown with the mare. In the case of a Mare that has not foaled before the Show, or whose foal has died, she shall, if not in milk, be eligible without further entry to compete among the Yeld Mares if a corresponding class for Yeld Mares be included in the Premium List. A Mare in a class for "Mares or Geldings" may or may not have had a foal in the year of the Show, but shall not have her foal exhibited with her, nor be in milk at the time of the Show. *Mares.*

35. All Sows born in or before 1947 must have produced a litter of pigs in the year of the Show before the opening day. Sows born between 1st January and 1st September 1948 must either have produced a litter of pigs before the Show, or produce a litter within three months of the last day of the Show. Certificates of the date of farrowing must be supplied in every case. *Sows.*

Pigs born in the year of the Show shall be subject to a Dentition Test, the test to be applied by a qualified Inspector, in accordance with accepted standards. Pigs having one of their permanent incisors cut will be considered as exceeding the age of six months. *Dentition Test.*

36. With reference to Regulation 33, birth of a live or full-time calf must be certified; and in regard to Regulation 34, birth of at least a nine months' foal; or in the case of the death of the dam, a Veterinary Surgeon's certificate must be produced certifying that at the time of death the animal was so far advanced with calf or foal that if it had lived it would have produced a full-time calf or foal within the periods stated in Regulations 33 and 34. Certificates required by the foregoing Regulations will be issued after the Show, and must reach the office of the Secretary as follows: calving certificates within ten months, and farrowing certificates within four months, of the last day of the Show. In default of this, the animal will be regarded as having failed to fulfil the Regulations, and the Prize will therefore pass to the animal next in order of merit or be forfeited. *Calves and Foals. Calving, Farrowing, and Foaling Certificates.*

Special Prizes. 37. Except when otherwise provided, the awards of Special Prizes shall not be subject to the Regulations as to calving, foaling, and farrowing.

Payment of Prizes. 38. The Premiums awarded, except those withheld till birth of calf or foal or litter of pigs is certified, will be paid as soon after the Show as practicable, and, with the exception of the Tweeddale Gold Medal, Special Cups, and Medals, may be taken either in money or in plate.

Veterinary Examination of Stallions and Colts. 39. No Stallion or entire Colt, two years old or upwards, shall be allowed to compete for any of the Society's Prizes unless it has previously been licensed for stud purposes during the current year by the Department of Agriculture for Scotland, the Ministry of Agriculture and Fisheries, or the Department of Agriculture for Northern Ireland.

Soundness of other Horses. 40. Judges are particularly requested to satisfy themselves, as far as possible, regarding the soundness of all Horses before awarding the Prizes, and to avoid giving Prizes to animals showing symptoms of hereditary disease. The Judges may consult the Society's Veterinary Surgeon if they deem it expedient. Private accommodation is provided for the examination of horses by the Veterinary Surgeon. No protests on veterinary grounds will be received.

Ewes. 41. Every Ewe must have given birth to and reared a lamb in the year of the Show; and Ewes of the Blackface and Cheviot breeds must be in milk, and have their lambs at foot.

Milking. 42. Animals in milk of the Dairy breeds must be milked dry at 8 o'clock on the evening previous to the opening of the Show in the presence of, and to the satisfaction of, the Steward of Cattle or a representative of the Society duly authorised by him. Animals arriving after 8 o'clock will be milked dry at the time of arrival.

Clipping. 43. Sheep must have been clipt bare after the first day of the November preceding the Show, no part of the animal to be clipt prior to that date—this Rule not to apply to Cheviot Sheep and Oxford Down Sheep.

No Blackface Sheep shall be eligible which has not been clipt bare on or after the 1st April of the year of the Show. (This Rule does not apply to Lambs.)

Colouring, &c., of Sheep and Pigs. 44. The Steward of Sheep, who can call in assistance if so desired by him, shall have full power to disqualify any pen of Sheep which he considers coloured, other than by the use of ordinary non-bloom dips free of added colouring matter, or when the fleece, face, or legs have been dealt with by the use of foreign substances.

Note.—Sheep shall not be disqualified under this Rule on account of their being shown with a light bloom colour, no traces of which shall come off on the hands or clothes of Judges or other persons handling the Sheep, and which colour shall be capable of being scoured out or will fade naturally in the course of a few months.

The use of artificial whitening or powder on Large White Pigs is prohibited, and the Judge is empowered to disqualify any pig so whitened or powdered.

Flock Books. 45. All Oxford Down and Suffolk Sheep shown must be entered or eligible for entry in the Oxford Down and Suffolk Flock Books respectively.

Poultry. 46. In Poultry the Aged Birds must have been hatched previous to, and Cockerels and Pullets on or after, 1st November of the year preceding the Show.

47. Railway Certificates for Stock, for both outward and return journeys, will be issued to Exhibitors before the Show along with their Tickets of Admission (see page 18). *Railway Passes.*

48. Stock and Poultry will be admitted on Monday, the day before the opening of the Show, and, with the exception of Horses, must be in the Yard before 12 o'clock that night. Horses must be in before 8 o'clock on the morning of Tuesday, except those entered in classes for which other times for arrival are elsewhere stated in this Premium List. Judging begins at 9.30 A.M. on Tuesday. Stock and Poultry will be exhibited on Tuesday, Wednesday, Thursday, and Friday. Any animals selected by the Stewards may be required to take part in the Stock Judging Competition on the Thursday. Stock may be admitted on the Saturday preceding the Show, but only by sending two days' prior notice to the Secretary's Office in the Showyard. *Admission of Stock.*

49. Horses and Cattle must be paraded at the times stated in the Programme of the Show, and when required by the Stewards, and under their direction. In Parade, Horses must be ridden or led as provided in their respective classes. Prize Cattle and Horses will receive one rosette each, which must be attached to the head of the animal. Attendants must be beside their animals *forty-five minutes before the hour of Parade*, and be ready to proceed to the ring immediately on receiving the order of the Stewards. Infringement of this Rule, or failure of any attendant to obey the orders of the Society's officials, will render the Exhibitor liable to a fine of 20s. for each separate infringement or act of disobedience, and to the forfeiture of any or all of the Prizes awarded to him at this Show. *Parades.*

50. Exhibitors shall be answerable for all acts, whether committed by themselves, their servants, or others in charge of their Stock, and shall be responsible for the condition of their animals during the whole time they remain in the Showyard. *Responsibility of Exhibitors.*

51. No animal shall be taken out of its stall after 10 A.M. during the Show except by order of the Stewards, or with permission of the Secretary. *Moving from Stalls.*

52. Cattle shall not be taken out of their stalls to be washed after the Judging has commenced. Cattle must not be washed beside the Judging Rings. Those infringing this Rule shall be liable to a fine of 10s. *Washing Cattle.*

53. Soap or other adhesive material must not be used in dressing cattle or horses. The use of blacking or other colouring matter on cattle is prohibited. Infringement of this Rule will render the animal upon which the material is used liable to be disqualified. *Soaping prohibited. Colouring matter.*

54. Loose-boxes will be provided for all horses; covered accommodation for other live stock. Boxes for attendants on Cattle, Horses, Sheep, Goats, and Pigs will be provided at a charge of £4 for each box for members; £5 for non-members. (See Rule 77.) *Loose-boxes and Stalls.*

55. Bulls must be secured by nose-rings, with chains or ropes attached, or with strong halters and double ropes. All Cattle must be tied in their stalls. *Securing Cattle.*

56. During the time the Show is open to the public no rug shall be hung up so as to conceal any animal in a horse-box or stall, except with the special permission of the Steward of that department. *Concealing Animals.*

57. Five days' supply of straw, hay, grass, and tares will be provided free by the Society. Any additional fodder or other kinds of food required will be supplied at fixed prices in the Forage-yard. *Fodder.*

The Forage-yard will close at 1.30 P.M. on Friday, the last supply to be given to attendants then ; and if any extra supply is required on account of stock remaining in the Yard after the close of the Show, notice must be given to the Forage Steward not later than 5 o'clock on Thursday. Any servant removing bedding from an adjoining stall will be fined in double the amount taken. Exhibitors may fetch their own cake or corn to the Yard, but not *grass, tares, hay, or straw*. Coops, food, and attendance for Poultry will be provided by the Society.

Feeding appliances. 58. Servants in charge of Stock must bring their own buckets or pails and a piece of rope or sheep-net to carry their forage. Mangers, and sheep and pig troughs, will be provided.

Sawdust. 59. Sawdust must not be used as bedding for Stock.

Water. 60. As the command of water in the Yard is limited, it is particularly requested that waste be avoided.

Lights and Smoking. 61. No lights allowed in the Yard at night, and Smoking is strictly prohibited within the Sheds. Those infringing this Rule shall be liable to a fine of 20s. The gates will be closed at midnight, and no person shall be allowed to enter or leave the Yard between that time and 5 A.M. without a special permit.

Closing of Gate. 62. Stock or Poultry cannot be removed from the Yard till 5 P.M. on Friday, the last day of the Show, except on certificate by the Veterinary Surgeon employed by the Directors, countersigned by the Steward of the department or the Secretary.

Removal of Stock. 63. At the close of the Show on Tuesday, Wednesday, and Thursday, horses may be withdrawn for the night on a deposit of £5 for each animal, which shall be forfeited, along with any prize money it may have gained, if the animal is not brought back. They must return between 7 and 7.30 the following morning, and those not in before 8 shall forfeit 10s. Horse passes to be applied for at the Secretary's Office between 5 and 6 P.M. on Tuesday, and the deposit, unless forfeited in whole or in part, will be returned between 12.30 and 2.30 on Friday.

With-drawal of Horses overnight. 64. When the Stock is leaving the Yard, no animal is to be moved till ordered by those in charge of clearing the Yard. Those transgressing this Rule shall be liable to a fine of 20s., and to be detained till all the other Stock is removed.

Order in removal. 65. Poultry may be penned before the opening and removed at the close of the Show by Exhibitors themselves or their representatives. In the event of neither the Exhibitor nor an authorized representative of the Exhibitor being present to pen or remove Poultry, the birds will be penned and removed by men hired and paid by the Society, but this will be done on the understanding that the men are hired to do the work on behalf of Exhibitors, and solely at their risk, and that the Society will be in no way responsible for expenses incurred or loss of or injury to Exhibits by errors or accidents in penning, despatching, or conveying Exhibits.

Penning and removing Poultry. 66. On the opening day of the Show the Poultry Shed will be closed to the public during the Judging. On the last day of the Show the Poultry Shed will be closed to the public at 4 P.M. ; at 5 P.M. Exhibitors or their representatives will be admitted to the Shed to remove Exhibits, provided the Exhibitor has, *not later than 11 A.M. on the last day of the Show*, given written notice to the Secretary to the effect that the Exhibitor or the Exhibitor's representative will attend at the Poultry Shed at 5 P.M. to remove the birds.

Closing of Poultry Shed to Public.

JUDGING STOCK AND POULTRY.

67. On Tuesday, the first day of the Show, no person will be admitted, except Servants in charge of Stock, till 8 A.M., when the Gates are opened to the public. *Opening Gates.*

68. The Judges will commence their inspection at 9.30 A.M. The spaces reserved for the Judging will be enclosed, and no encroachment thereon shall be permitted. *Judging.*

69. In no case shall a Premium be awarded unless the Judges deem the animals to have sufficient merit; and where only one or two lots are presented in a class, and the Judges consider them unworthy of the Premiums offered, it shall be in their power to award a lower prize. *Insufficient merit.*

70. In addition to the Premiums, the Judges may award **one** Very Highly Commended, **one** Highly Commended, and as many Commended tickets in each class as they consider justified by the number and merit of the entries. *Commendations.*

71. Ayrshire, British Friesian, and Jersey Cows which have not calved before the Show, whether entered in a class for Cows in Milk or for Cows in Calf, shall be judged along with the Cows in Calf, and Ayrshire, British Friesian, and Jersey Cows or Heifers which have calved before the Show—in whichever of the classes entered—shall be judged along with Cows in Milk. Heifers entered in a Milk Class, which have not calved before the Show, will be judged along with Heifers in Calf. *Ayrshire, British Friesian, and Jersey Cows and Heifers.*

72. Attending Members will accompany the Judge of each section. It will be the duty of Attending Members to bring the animals out to the Judges and to see that no obstruction is offered to them, and that the space reserved for them is not encroached upon; to ticket the prize animals; to send the Nos. of the prize animals to the Award Lectern near the Secretary's Office; to assist the Judges in completing their return of awards; and should any difficulty arise, to communicate with the Stewards or Secretary. *Attending Members duties.*

73. It shall not be competent for any Exhibitor, nor for his Factor or Land-Steward, to act as a Judge or Attending Member in any class in which he is competing.

DAIRY PRODUCE.

74. Dairy Produce will be received in the Showyard on Monday, the day before the opening of the Show, and till 8 A.M. on Tuesday, the first day of the Show. Judged at 9.30 A.M. on Tuesday. Exhibited Tuesday, Wednesday, Thursday, and Friday.

75. Dairy Produce must have been made on the Exhibitor's farm in the year of the Show. No Exhibitor shall show more than **one** lot in each class. Exhibits of Dairy Produce may be placed before the opening and removed at the close of the Show by Exhibitors themselves or their representatives. In the event of neither the Exhibitor nor a person with written authority from the Exhibitor being present to place or remove exhibits, they will be placed and removed by men hired and paid by the Society, but this will be done on the understanding that the men are hired to do the work on behalf of Exhibitors, and solely at their risk, and that the Society will be in no way responsible for expenses incurred or loss of or injury to exhibits by errors or accidents in placing, despatching, or conveying exhibits. In the case of exhibits which are not removed by 5.30 P.M. on the closing day of the Show, the Society will hold *Placing and removing Dairy Produce.*

itself at liberty to hand them over to the railway companies for despatch to the respective Exhibitors.

STALL RENT.

Stall Rent. 76. The Stall Rents (which include Entry Fees), as stated opposite the individual classes in this List, shall be paid by Exhibitors when making their entries. The Secretary is instructed to return entries sent without the necessary fees.

ACCOMMODATION FOR ATTENDANTS.

Accommodation for Attendants. 77. Boxes for accommodation of attendants on Stock will, if desired, be provided beside the Stock at a charge of £4 per box for members and £5 for non-members. Applications for attendants' boxes must accompany entries of Stock, and in the case of all Horses, Exhibitors must state, at the time of entry, the animal next to which the attendant's box is to be placed. Attendants' boxes in the Cattle, Sheep, Goat, and Pig Sections will be erected at the end of each run of shedding, and where an Exhibitor has more than one animal the application must indicate the animal nearest to which the Attendant's Box is required. Attendants' boxes cannot be guaranteed after the closing date.

IMPLEMENTS AND OTHER ARTICLES

Refusing Entries. 78. Agricultural Implements, and Implements and collections of articles not Agricultural, will be received for Exhibition, but the Secretary is entitled to refuse entries from dealers in articles not deemed worthy of Exhibition.

79. Applications for space for the Exhibition of Implements and other articles must be made on the printed form obtainable from the Secretary, 8 Eglinton Crescent, Edinburgh 12, which must be completed and lodged with him on or before 28th February 1949, accompanied by the necessary fees.

Space for Stands. 80. Exhibitors must take their space in one or other of the Sections listed under Rule 81. Space in Section 7 (Motion Yard Shedding) must be taken in units of 15 feet frontage. Space in other Sections must be taken in units of 10 feet frontage.

81. Rate for space, payable by Exhibitors when making their Entries :—

Section.	Members.	Non-Members.
1. Open space without Shedding, 20 ft. deep, per 10 ft. frontage	£4 0 0	£5 10 0
2. Open space without Shedding, 40 ft. deep, per 10 ft. frontage	8 0 0	11 0 0
3. Shedding, 20 ft. deep, 7 ft. to eave, per 10 ft. frontage	6 0 0	7 10 0
4. Shedding, 20 ft. deep, 7 ft. to eave, closed at back, per 10 ft. frontage	10 0 0	12 0 0
5. Main Square, without Shedding, for erection of Exhibitor's own Pavilion (construction of which must be approved by Society), 50 ft. deep, per 10 ft. frontage	12 0 0	15 0 0
6. *Motion Yard, without Shedding, 55 ft. deep, per 10 ft. frontage	9 0 0	12 0 0
7. *Motion Yard, with Shedding (10 ft. open behind, 20 ft. covered, and 25 ft. open in front), 11 ft. to eave, per 15 ft. frontage	18 0 0	22 10 0
8. Special Section for Motor Vehicles, 30 ft. deep (20 ft. covered and 10 ft. open in front), 11 ft. to eave, per 10 ft. frontage	10 0 0	12 0 0

* See Rules 80 and 83.

All internal fittings to be executed by the Exhibitor at his own expense. The Society's Showyard Erector must be employed. See Rule 103.

82. In order to encourage exhibits of Agricultural Implements from operative Blacksmiths and Carpenters in the district of the Show, open space will be provided for these in some less prominent part of the Yard at a charge of £2 for space 10 feet wide and 20 feet deep. *Local Operatives.*

83. * Space is not let partly covered and partly open. Exhibits not in motion may be excluded from the Motion Yard. The space in the Motion Yard is limited in extent, and is intended mainly for exhibits in motion. The Society reserves the right to refuse Entries in this Section where it considers that the proposed exhibits are not suitable for inclusion in the Section. *Exhibits not in Motion.*

84. The maximum extent of space which any one Exhibitor may be allotted shall be 120 feet of frontage. *Maximum Space.*

85. The Society reserves the right to allot to applicants for Stands either the whole or part of the space they ask for. *Allocation of Space.*

86. No Money Prizes or Medals, except when specially offered, will be given by the Society for Implements of any kind. *Premiums.*

87. Each Exhibitor in the Implement Department who is not a Member of the Society will receive one free Ticket of Admission to the Showyard for himself or a member of his firm. All Exhibitors will receive, for the use of attendants employed by him at his Stand, two Tickets of Admission for each complete ten feet of frontage in the Motion Yard, and one Ticket for each complete ten feet of frontage in the other Sections. No additional Free Tickets can be issued in any circumstances whatever. Additional Attendants' Tickets, not more than three for each ten feet of frontage, and in no case exceeding a maximum of twenty for one Exhibitor, may be obtained by application in writing by the Exhibitor at 10s. each. *Exhibitors' and Attendants' Tickets.*
No tickets will be issued without an Order.

88. The Tickets of Admission for Exhibitors and Attendants referred to in the foregoing Regulations will (about fourteen days prior to the Show) be issued to the Exhibitors in blank, with the number of the Exhibitor's Stand. The name of the person for whom each Ticket is intended must be written on it before it is used. Each person holding a Free Ticket of Admission must sign his or her name on the back thereof, and must also, when required, sign his or her name in the book at the Entrance Gate. Exhibitor's attendants are strictly cautioned not to lend or transfer their Tickets, which can be used only by the persons whose names they bear, and who must be *bona fide* acting for, or employed by, the Exhibitor. No ticket is transferable. An Exhibitor is liable to a fine of £5 for each case of transfer or other improper use of a Ticket issued to himself or employee. *Tickets to be filled up and signed.*
Tickets not Transferable. Improper use of Tickets.

89. Every article to be exhibited must be entered on the Society's Entry Form. Any article not so entered that is taken to the Show is liable to be ordered out of, or removed from, the Showyard, or confiscated to the Society. Exhibitors infringing this Rule are more-over liable to a fine of £5. *Articles not entered.*

90. Implements will be received in the Yard from Tuesday, 7th June, till 5 o'clock on the afternoon of Monday, 20th June. Exhibited Tuesday, Wednesday, Thursday, and Friday. The Schedule of Entry must be filled up so far as within the knowledge of the Exhibitor, and, where possible, prices must be stated. *Admission of Goods.*

* Special provision may be made for Exhibitors of both machinery in motion and implements and machinery not in motion on application being made to the Secretary.

- Consigning Implements.* 91. There must be attached to each Implement, when forwarded to the Show, a label bearing the Exhibitor's name, and that of the Implement, as well as the number of the Exhibitor's Stand.
92. The carriage of all Implements must be prepaid.
- Placing Exhibits.* 93. The articles of each Exhibitor must all be placed in one Stand, except Implements in motion, and must not on any account extend beyond the allotted space. No article shall be moved out of its Stand, or the Stand dismantled, till the termination of the Show, at 5 P.M. on Friday.
- Removing Exhibits.* 94. Exhibitors must arrange their own articles *within* the space allotted to them before 9 o'clock on Tuesday, the first day of the Show, and to the satisfaction of the Stewards in charge of the Implement Yard. Exhibitors are prohibited from sub-letting space allotted to them, and from displaying the name of any other firm on their Stand. All signs, except signs on gables, must face the front only. Nails must not be driven into the canvas.
- Signs.* 95. Exhibitors are required to have their Stands and the portions of the alleys immediately adjoining them swept up before eight o'clock on each morning of the Show.
- Sweeping Stands, &c.* 96. Exhibitors are not allowed to distribute handbills anywhere in the Yard except at their own Stand; and they must not for this or any other purpose encroach upon the adjacent alleys or open spaces.
- Handbills.* 97. "Cheap-Jacks" are not admitted to the Showyard. The selling of goods by auction, shouting, and other behaviour calculated to annoy visitors or Exhibitors, are strictly forbidden. The use of mechanical loud-speaking appliances is also prohibited. Exhibitors infringing this Regulation are liable to a fine of £5 and to have themselves and their goods ordered out of, or removed from, the Showyard, or to have their goods confiscated to the Society.
- Selling by auction and noisy behaviour forbidden.* 98. All Machines requiring steam or fire must be entered as such in the Schedule, and will be placed in the Motion Yard. *Coke only shall be used in all cases where fire is required.* Coal shall not be used at any time in the Showyard. Those infringing this Rule shall incur a penalty of £5.
- Fuel.* 99. No Steam Engine shall be driven in the Yard at a greater speed than 4 miles an hour. Traction Engines shall not be used in conveying Exhibits or other goods into or out of the Showyard or from one place to another therein.
- Steam Engines.* 100. Locomotive and Traction Engines and other Machines must not be moved from their places without permission of the Secretary or Stewards, and must not leave their Stands till 6 P.M. on Friday.
- Traction Engines.* 101. Motor Lorries, Vans, or other vehicles belonging to Standholders, will not be allowed to remain in the Showyard during the period of the Show. Vehicles conveying Exhibits to Stands prior to the Show must follow the routes indicated by the Society's officials, and must leave the Showyard immediately on completing delivery. Motor Cars conveying passengers will not be permitted to enter the Showyard prior to or during the Show.
- Cycles.* 102. The riding of Cycles in the Showyard is prohibited.
- Fitting up of Stands.* 103. Exhibitors requiring work executed in connection with the fitting up of Stands allotted to them must employ the Society's Showyard Erector.

Orders for work should be addressed to the Society's Master of Works, 8 Eglinton Crescent, Edinburgh 12, and should be in his hands not later than three weeks before

the opening of the Show. In view of the restrictions on the use of timber and other materials, work can be executed only provided the materials are available or are supplied by the Exhibitor. In the event of the Society's Showyard Erector being unable to undertake the work Exhibitors may employ an outside contractor, but before doing so must obtain permission in writing from the Society's Master of Works.

104. Exhibitors desiring the use of gas in the Showyard should apply to the Manager, Gas Department, Dundee, and those desiring electric power should apply to Messrs Pratt Bros. (Edinburgh), Ltd., 3 West Park Place, Dalry Road, Edinburgh. in both cases not later than 14th May. *Gas and Electric Power.*

Exhibitors desiring water laid on to their Stands should apply, not later than 14th May, to the Society's Master of Works, 8 Eglinton Crescent, Edinburgh, who will furnish particulars of charges. *Water.*

105. When the ground requires to be broken, the turf must be carefully lifted and laid aside, and the surface must be restored to the satisfaction of the Society, and at the expense of the Exhibitor. Failing this being done, the Society shall be at liberty to restore the ground and charge the cost to the Exhibitor. *Restoring Turf.*

106. The Society will not be responsible for any accident that may occur from the machinery belonging to any Exhibitor; and it is a condition of entry that each Exhibitor shall hold the Society harmless, and indemnify it against any legal proceedings arising from any accident caused by his machinery. *Accidents.*

107. The Society will not be liable for any loss or damage which Implements or other articles may sustain at the Show, or in transit.

108. All Exhibitors and other persons in charge of Exhibits, and all persons admitted into the Showyard, shall be subject to the Rules of the Society, and shall obey the orders of the Stewards, Secretary, and other officials of the Society. Exhibitors shall be answerable for the conduct of their servants or representatives.

109. The following are the arrangements for the admission of Supplies (Refreshments or other goods) for Stand-holders during the Show: Messenger on foot (with or without hand-barrow), with supplies, admitted by Special Ticket; price of one admission, 2s. 6d., for six admissions, 12s. 6d. Motor or horse vehicle and driver, with supplies, admitted by Special Ticket; price for one admission, 5s., for six admissions, £1, 5s. These Special Tickets may be had from the Secretary. Vehicles, with supplies, will be admitted to the Showyard only between *Seven o'clock and Nine o'clock*, on each morning of the Show, except by written permit from the Secretary. *Admission of Supplies for Stand-holders.*

Vehicles, with a carrying capacity of more than 3 tons, will not be admitted to the Showyard at any time, except by special permit from the Secretary. **This rule will be strictly enforced.**

110. The giving of Alcoholic Drinks to visitors at Stands in the Show is strictly prohibited. With a view to the enforcement of this rule the Society reserves the right of unrestricted access, by its authorised representatives, to all Exhibitors' Stands during the Show. *Alcoholic Drinks.*

111. Photographing in the Showyard is not permitted, except by photographers having a Stand in the Showyard or holding a "Photographer's Ticket." The "Photographer's Ticket" may be had from the Secretary, price 20s. It admits the holder to the Show when open to the public, and entitles him to photograph in the Showyard, *Photographing in Show-yard.*

subject to arrangements made by the Stewards. It does not entitle the holder to sell photographs in the Showyard. No photographer shall be allowed in the ring during Parades, except with the sanction of the Steward of Parades.

112. The decision of the Directors shall in every matter arising in connection with the Show be final.

FLOWER SHOW

See also Implement Regulations 78 to 112.

1. Exhibits in this section may comprise collections of flowers, fruits, plants or shrubs, formal gardens, and rock gardens.

2. Application for space, for which no rent or entry fee is payable, must be made on special entry forms, to be obtained from the Secretary and lodged on or before 16th April. Entry forms must give full details of each Exhibit and the amount of space required. Space may be either in covered shedding or in the open. Space in shedding will be allocated in sections of 10 feet frontage with a depth of 7 feet and a maximum of 60 feet frontage for any one Exhibitor. Flat tabling, 4 feet 6 inches wide and 2 feet 3 inches high, will be provided free of charge. Space in the open will be allocated in sections of 10 feet frontage with a depth of 20 feet. Special consideration will be given to applications from Exhibitors desiring a greater depth than 20 feet.

3. The Society reserves the right to refuse any application for space, or to limit the amount of space to be allocated to any Exhibitor.

4. Each Exhibitor shall receive one Exhibitor's ticket and, in addition, two attendants' tickets for each 10 feet of frontage. Additional attendants' tickets, not more than three for each 10 feet of frontage, and in no case exceeding a maximum of twenty, may be purchased at a price of 10s. each. *No tickets will be issued without an order.*

5. All Exhibits must be in position not later than 5 p.m. on Monday, 20th June, with the exception of cut flowers, which may be staged up till 8 a.m. on Tuesday, 21st June. Stands must remain open until the Show closes on each of the four days.

NEW IMPLEMENTS

1. Entries of New Implements for the Society's Silver Medal must be made on or before 28th February. Entries shall be made on a special form obtainable from the Secretary, and must define clearly the exact nature of the novelty which qualifies such implement to be entered for a Medal. Unless the "New Implement" be properly described in the specification, and particulars of its novelty are given at the time of making the entry, it will not be accepted.

2. For each entry of a "New Implement," a non-returnable Entry Fee of £5 will be charged.

3. In cases of sufficient merit, the Judges will recommend the award of the Society's Silver Medal to New Implements for agricultural or estate purposes, or to new improvements in such implements.

4. The Society does not bind itself to try in the field every "New Implement" entered for a Silver Medal, but in general a practical trial will be required before an award is made. The Judges shall report to the Directors those cases in which they consider a practical trial necessary.

5. Where intimation is received by the Secretary, not later than the 16th April, that a "New Implement" is ready for trial, the Directors may arrange for a practical trial before the Show at a place and date to be decided upon. In other cases the practical trial of New Implements will take place after the Show.

6. Any Exhibitor who expresses a wish to do so can, with the sanction of the Steward of Implements, at his own expense take his New Implement out of the Showyard during the Show week and put it to work, and, if within a reasonable distance, the Judges will, if they deem it necessary, inspect it at work and decide if it is worthy of a Silver Medal.

7. No Silver Medals will be awarded to, nor can any entry as New Implements be accepted of, machines of any class for which competitive trials have been announced by the Society as about to take place.

8. The Judges of New Implements will commence their inspection at 2.30 P.M. on Monday, 20th June, and will take in rotation the Stands of the Exhibitors who have entered New Implements for the Society's Silver Medals. Each Exhibitor, or his representative, will be expected to be at the Stand to explain the working of the Implement to the Judges. If the Exhibit be not ready and in working order by the time the Judges make their inspection, it is liable to be struck off the list.

9. All publications by Exhibitors of the award of the Society's Silver Medals must state the year of the award, and must specify the exact nature of the "New Implement," of the improvement, or of the attachment to an Implement, for which the Silver Medal has been awarded.

10. On the recommendation of the Judges, with the approval of the Directors, any New Implement of merit, which cannot be sufficiently tried, or which is capable of further development, may be entered and exhibited as a "New Implement" at the succeeding Show of the Society.

11. The Judges' decision, when duly accepted and recorded, will in all cases be final.

RESERVED SEATS (NUMBERED) IN GRAND STAND

The booking of Reserved Seats (numbered) will open on 15th May.

For Charges and Tickets, apply to Secretary up to opening day of Show.

Thereafter unsold tickets are obtainable only in the Showyard at the Booking-offices behind the Grand Stand.

ADMISSION OF THE PUBLIC

The public will be admitted daily at 8 A.M. Judging begins on Tuesday at 9.30 A.M. The charges for admission to the Yard will be—**Tuesday**, from 8 A.M. till 5 P.M., 10s. **Wednesday**, from 8 A.M. till 5 P.M., 7s. 6d.; from 5 P.M. to 8 P.M., 3s. **Thursday**, from 8 A.M. till 5 P.M., 5s.; from 5 P.M. till 8 P.M., 3s. **Friday**, from 8 A.M. till 5 P.M., 3s.

On **Thursday** and **Friday** children under fourteen years of age admitted at 1s.

No Pass-out Checks given, and no re-admission without payment.

Season Tickets—£1 each (children under 14 years of age, 7s. 6d. each)—on application to Secretary. On the days of the Show, Season Tickets are sold only at the Entrance Gates.

ADMISSION OF MEMBERS AND EXHIBITORS

On exhibiting their "*Member's Badge*," which is strictly not transferable, Members of the Society are admitted free to the Showyard. Badges will be sent to all Members residing in Great Britain, Northern Ireland, and Eire (Irish Free State), whose addresses are known, and on no account will duplicates be issued. **All Members not producing their badges must pay at the gates, and the admission money will not on any account be returned.** Badges must be signed by Members before being presented at the gate, and Members should continue to wear the badge during the whole time that they are in the Showyard.

Tickets of admission to the Showyard are sent to Exhibitors of Stock, Poultry, Dairy Produce, &c. (not Members), whose Entry Fees amount to not less than 12s. 6d.

For Exhibitors of Implements and their assistants tickets are issued as provided in the Regulations for Implements.

VARIOUS

Exhibitors may display their own Placards *inside and in front of* their Stands; with this exception, no Bills of any kind other than those of the Society are permitted on any of the Show erections. No newspapers or any other articles to be carried about the Yard for sale or display.

No Carriages or Equestrians admitted without special leave from the Directors, and then only for Invalids. Bath-chairs may be brought in.

Premium Lists, Regulations, and Certificates of Entry may be obtained by applying at the Secretary's Office, No. 8 Eglinton Crescent, Edinburgh 12.

All Communications should be addressed to the Secretary of The Royal Highland and Agricultural Society of Scotland, No. 8 Eglinton Crescent, Edinburgh 12. From 14th to 23rd June, to the Secretary's Office, Showyard, Riverside Park, Dundee.

Address for Telegrams—"SOCIETY," EDINBURGH.

Telephone No.—EDINBURGH, 23655.

RAILWAY ARRANGEMENTS

The British Railways will be furnished with a list of the Exhibitors of Stock and Implements, after the 1st June. All applications for horse-boxes and trucks, and for information as to train arrangements, must be made by the Exhibitors themselves to the Stationmaster or Goods Agent where their Stock is to be trucked.

The Railways will only accept traffic for conveyance by Goods and Passenger Train to and from the Show "*Carriage Paid*," and the rates charged for carriage will not in any case include delivery to, or collection from, the Showground.

The arrangements for the conveyance of Live Stock, Implements, &c., to and from the Show are indicated below, but Exhibitors are recommended to apply to the Railways for full particulars:—

1. Live Stock, Agricultural Machines, Implements, and other exhibits to the Show will be charged the ordinary rates applicable.

2. Live Stock, Agricultural Machines, Implements, and other exhibits from the Show, if sold, will be charged the ordinary rates applicable.

3. Live Stock from the Show, if unsold, and returned not later than the second day (excluding Sunday) after the closing day of the Show, will be carried at half rates back to the Station whence the animals were sent, at owner's risk, on surrender of a Certificate from the Exhibitor, signed by the Show Secretary, to the effect that they are really unsold; failing surrender of such Certificate, ordinary rates will be charged. The reduction to half rates is to be allowed only when the Stock are consigned to be returned by the same route as that by which they were conveyed to the Show, but it shall be in the option of the Railways to return the Stock at half rates by a different route.

4. Live Poultry from the Show, if unsold, and returned not later than the second day (excluding Sunday) after the closing of the Show, will be carried by Passenger Train at half rates back to the Station from which sent, at owner's risk, on surrender of a Certificate signed by the Secretary of the Show to the effect that the Poultry are unsold and remain the property of the Exhibitor. No Certificate will be required for such traffic, which is intended by the owner to be returned from the Show to the original sending Stations by the same route as originally forwarded and the charges prepaid for both the outward and return journeys. (Poultry will be charged ordinary rates both ways when conveyed by Goods Train.)

5. Horse-boxes, or other Passenger Train vehicles, will not be provided for the carriage of Live Stock sent by Goods Train. *For rates for Horse-boxes by Passenger and Special Trains application should be made to the Railways.*

6. Provender conveyed to and from the Show in the same vehicle as Live Stock will be charged at half the Exceptional Owner's Risk Parcels Scale of Rates, subject to the following free allowance by Rail :—

Cattle and Horses	per animal, 168 lb.
Sheep, Goats, Lambs, Pigs, and Calves	„ 84 „

7. The carriage of all Live Stock, Implements, and other articles going to the Show for exhibition must be PREPAID; and the carriage on all traffic returned from the Show by Passenger Train Service must be PREPAID.

The carriage charges on Live Stock conveyed in special vehicles by Passenger Train and intended to be returned to the original sending Station may be prepaid for the return journey at the original sending Station if the owner so desires.

The Rail Charge on all exhibits which are conveyed by Passenger Train in the Guard's Van and intended to be returned from the Show direct to the original sending Station by the same route must be PREPAID, for both the outward and return journeys, at the original sending Station. The agreed form of address label for Poultry, Rabbits, Dairy Produce, Bee Appliances and Honey, and Rural Industries exhibits, which will be supplied through the Secretary of the Society, must be used in such cases.

8. Live Stock (in special vehicles), Poultry, &c., conveyed by Passenger Train, if transferred from one Show to another, or exhibited at several Shows consecutively, will be charged at ordinary rates in respect of each journey up to the last Show to which the

animals and/or birds are sent for exhibition. If remaining unsold when returned from the latest Show, they will, on surrender of Certificate provided and signed by the Secretary of the Show to the effect that they are unsold, be carried back to the Station whence originally sent at owner's risk at half rate.

9. Men in charge of Live Stock to the Show and men in charge of unsold Live Stock returning from the Show are conveyed free in the cases shown below, when certified by the owners to be *bona fide* in charge of such Live Stock, and an indemnity is given in respect of the men :—

- (a) *In Horse Boxes and/or Road Vehicles.*—Horses and Cattle : One man for each consignment, except where the consignment requires more than one vehicle, when one man to each vehicle will be conveyed free, but where two or three Horses or Cattle forming one consignment are sent in the same vehicle, and a man is required to travel with each animal, a man for each animal will be conveyed free, provided each animal is charged for separately.
- (b) *In Horse-Boxes and/or Road Vehicles.*—Small animals : One man to each vehicle.
- (c) *In specially constructed Cattle Trucks or Owners' Vans.*—Cattle or other animals : One man to each vehicle.
- (d) Men travelling additional to those conveyed free are charged half the ordinary single fare for a single journey or ordinary single fare for a return journey.

10. Agricultural Machines, Implements, and other exhibits from the Show, if unsold, will be conveyed at half rates back to the Station whence they were sent, at owner's risk, on production of a Certificate from the Exhibitor (provided and signed by the Show Secretary) to the effect that they are unsold ; failing production of such Certificate, ordinary rates will be charged. The reduction to half rates will be allowed only when the articles are returned by the same route as that by which they were conveyed to the Show, but it shall be at the option of the Railways to return the articles at half rates by a different route. This applies only to Goods Train traffic.

11. Unsold articles, previously carried by Goods Train, transferred from one Show to another, or exhibited at several Shows consecutively, and returned to the Station from whence originally sent, are conveyed at half rates at owner's risk, on production of a Certificate from the Exhibitor (provided and signed by the Show Secretary) to the effect that they are unsold ; failing production of such Certificate, ordinary rates will be charged.

12. Tents, Canvas, Show Stands, and other articles not for exhibition—

- (a) When the property of Exhibitors, will be charged half the ordinary rate at owner's risk from Show to Show, and on return from the Show to the Station from whence originally despatched. This applies only to Goods Train traffic.
- (b) When not the property of Exhibitors, will be charged the ordinary rates both going to and returning from Show.

13. Carriages and other Road Vehicles are only conveyed by Passenger Train when this can be conveniently done.

DELIVERY AND COLLECTION CHARGES.

Cartage Charges to be paid by the Exhibitor for the Delivery or Collection of traffic between the Railway Stations at Dundee and the Showground of The Royal Highland and Agricultural Society's Show at Riverside Park on 21st, 22nd, 23rd, and 24th June 1949.

1. General Goods and Passenger Train Traffic.

All descriptions (including provender and luggage of Exhibitors or their employees), except otherwise herein provided :—

<i>Weight—</i>			<i>s.</i>	<i>d.</i>
Up to and including 28 lb.		per consignment	0	6
		(Per package in the case of ordinary parcels traffic.)		
Over 28 lb. but not exceeding 56 lb.		do.	1	0
„ 56 lb.	„ „ 1 cwt.	do.	1	6
„ 1 cwt.	„ „ 3 cwt.	do.	2	6
„ 3 cwt.	„ „ 5 cwt.	do.	3	6
„ 5 cwt.	„ „ 5 tons	per ton	13	0

Articles exceeding 30 feet in length or 5 tons in weight shall be carted only by special arrangement and on special terms.

(a) General traffic in Railway containers to be charged the appropriate percentage differential.

(b) Small Live Stock carted under this clause includes Poultry.*

* Poultry and Rabbit exhibits only will be conveyed at the Society's expense from the Railway Station to the Showyard and back, but no exhibit subject to rail charges will be received by the Society. All other delivery charges must be paid by the Exhibitor.

2. Owners' Vans Hauled on Own Wheels.

	<i>s.</i>	<i>d.</i>
Up to and including 4 tons	each	24 0
Exceeding 4 tons	„	30 0

3. Poultry Houses and Rustic Houses, Complete.

Per ton, with a minimum charge as for 1 ton.	13	0
--	----	---

4. Live Stock.**(a) Loose—**

(i) Sole use of vehicle for traffic from one sender to one consignee . . . per load 15 0

(ii) Animals not requiring sole use of vehicle—

Cattle	per head†	11 6
Calves, Sheep, Goats, or Pigs	per head†	6 0

(b) In Crates—

Calves, Sheep, Goats, or Pigs	per crate†	8 6
---	------------	-----

† For traffic from one sender to one consignee, charges not to exceed the "per load" rate.

5. Cartage or Haulage from Point to Point on Showground.

(a) Railborne—		<i>s.</i>	<i>d.</i>
General traffic (including empties)	per load	6	0
	Min. charge per package	1	0

(b) Non-Railborne—			
General traffic (including empties)	per load	12	0
	Min. charge per package	2	0

THE PRESIDENT'S CHAMPION MEDALS

A Champion Medal is given by The Earl of Elgin and Kincardine, K.T., C.M.G., President of the Society, for the best *Animal* in each of the following sections:—

- | | | |
|---|---|---|
| 1. Shorthorn.
2. Aberdeen-Angus.
3. Galloway.
4. Belted Galloway.
5. Highland.
6. Hereford.
7. Ayrshire.
8. British Friesian.
9. Jersey.
10. Fat Cattle. | 11. Clydesdale Stallion or Colt.
12. Clydesdale Gelding.
13. Clydesdale Mare or Filly.
14. Suffolk.
15. Paroheron.
16. Hunter.
17. Highland or Western Island Pony.
18. Shetland Pony.
19. Blackface Sheep. | 20. Cheviot.
21. North Country Cheviot.
22. Border Leicester.
23. Half-Bred.
24. Oxford Down
25. Suffolk.
26. Goat.
27. Large White Pig.
28. Large Black.
29. Wessex Saddleback. |
|---|---|---|

NOTE.—*Animals entered as Extra Stock may compete for these Medals. Former Winners of the President's Medals are eligible. The Society shall have the right to photograph the Winners for publication in the 'Transactions.' At this Show no animal can be awarded more than one of these Medals.*

ENTRY FEES		CLASS	* CATTLE (To be judged at 9.30 A.M. on Tuesday, 21st June) SHORTHORN Judges: A. Anderson; James Biggar <i>President's Champion Medal for best Shorthorn Animal</i>		PREMIUMS			
Members	Non-Members				First	Second	Third	Fourth
40/-	80/-	1	Bull born before 1st December 1946.		£ 20	£ 12	£ 8	£ 4
40/-	80/-	2	Bull born on or after 1st December 1946 and before 1st December 1947		20	12	8	4
40/-	80/-	3	Bull born on or after 1st December 1947 and before 1st April 1948		15	10	5	3
40/-	80/-	4	Bull born on or after 1st April 1948.		12	8	4	2
40/-	80/-	5	Cow in Milk, born before 1st December 1945		15	10	5	3
40/-	80/-	6	Cow in Milk, born on or after 1st December 1945 and before 1st December 1946		12	8	4	2
40/-	80/-	7	Cow or Heifer born on or after 1st December 1946 and before 1st December 1947		12	8	4	2
40/-	80/-	8	Heifer born on or after 1st December 1947 and before 1st April 1948		12	8	4	2
40/-	80/-	9	Heifer born on or after 1st April 1948		12	8	4	2
			¹ Renfrewshire Perpetual Gold Challenge Cup, value £500, for best Animal in the Shorthorn Classes, "Extra Stock" eligible to compete.					
			² The Duthie Perpetual Challenge Cup, value £220, for best Animal in the Shorthorn Classes, "Extra Stock" eligible to compete.					

* See Rules 2, 32, and 33.

¹ This Cup, along with an endowment of £500, was provided from money collected in Renfrewshire by the late Provost Muir M'Kean of Paisley, and is in commemoration of the Society's first Show in the County of Renfrew in 1913. This year the Cup is offered for the best Shorthorn animal. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. (*See Note.*)

² This Cup was gifted by the late Mr William Duthie, Collynie. The Cup may not be won on more than one occasion with the same animal. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. (*See Note.*)

NOTE.—Under the original conditions of the awards the winners of the Cups on each occasion were entitled to receive miniature replicas in silver as mementoes of their winning the Cups. In view of the prohibitive cost of such replicas at the present time, the Society reserves the right to award, in place of the replicas, large Silver Medals and sums equivalent to the free annual income of the Funds.

ENTRY FEES		CLASSES	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
		CATTLE				
		SHORTHORN—continued				
		¹ The Eduardo Bullrich Silver Challenge Cup, value £150, for the best Pair of Animals in the Shorthorn Classes, consisting of one Male and one Female of any age, bred by Exhibitor, "Extra Stock" eligible to compete. The Cup to become the property of an Exhibitor who shall win it on three occasions, not necessarily in succession.	£	£	£	£
		² Silver Cup, value £75, for the best Group of Three Animals in the Shorthorn Classes, consisting of one Bull and two Females, "Extra Stock" eligible to compete. The Cup to become the property of an Exhibitor who shall win it five times, not necessarily in succession.				
		³ The Emilio R. Casares, jun., "Junior Memorial Champion Cup," value £80, for best Shorthorn Bull in Class 4, calved on or after 1st April of the year preceding the year of the Show, that has passed the tuberculin test.				
		⁴ The Duthie Prize, value about £30, for the best Group of Three Animals entered in the Shorthorn Classes, either got by the same sire or from the same dam, or comprising a Bull with two of his progeny, or a Cow with two of her progeny. All the animals to be the property of the same Exhibitor. "Extra Stock" eligible to compete.				
		⁵ Tweeddale Gold Medal, value about £25, for best Shorthorn Bull, "Extra Stock" eligible to compete.				
		⁶ Best Shorthorn Bull in the Show, entered in or for Coates's Herd-Book—£20.				
		⁶ Silver Medal to the Breeder of the winner of above Prize.				
		Breeder of best Bull of any age in the four Classes ("Extra Stock" not eligible to compete) —The Silver Medal.				
		⁶ Best Shorthorn Female in the Show, entered in or for Coates's Herd-Book—£20.				
		⁶ Silver Medal to the Breeder of the winner of above Prize.				
		PRIZE MONEY BY SOCIETY	£284			
		CONTRIBUTED	70			

¹ Presented by Messrs Adolfo Bullrich & Co., of Buenos Aires, through the Shorthorn Society. A Silver Medal will be given by the Highland Society to the winner as a memento of his winning the Cup.

² Given by Mr William M'Nair Snadden, M.P., The Coldoch, Blair Drummond, Stirling.

³ Given by Messrs J. Baird & Co. (Falkirk) Ltd., Bantaskin, Falkirk. This Cup will become the property of the Exhibitor who shall win it three times, not necessarily in succession.

⁴ Annual Free Income from a legacy bequeathed to the Society by the late Mr J. Duthie Webster to provide a prize for Shorthorn Cattle at the Society's Annual Show.

⁵ Annual Free Income from Fund of £500.

⁶ Given by the Shorthorn Society.

ENTRY FEES		CLASS	CATTLE	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
				£	£	£	£
			CATTLE				
			ABERDEEN-ANGUS				
			Judges : The Hon. Mrs Michael Mason ; Charles M'Combie				
			<i>President's Champion Medal for best Aberdeen-Angus Animal</i>				
40/-	80/-	10	Bull born before 1st December 1946	20	12	8	4
40/-	80/-	11	Bull born on or after 1st December 1946 and before 1st December 1947	20	12	8	4
40/-	80/-	12	Bull born on or after 1st December 1947 and before 1st March 1948	15	10	5	3
40/-	80/-	13	Bull born on or after 1st March 1948	12	8	4	2
40/-	80/-	14	Cow in Milk, born before 1st December 1945	15	10	5	3
40/-	80/-	15	Cow in Milk, born on or after 1st December 1945 and before 1st December 1946	15	10	5	3
40/-	80/-	16	Cow or Heifer born on or after 1st December 1946 and before 1st December 1947	12	8	4	2
40/-	80/-	17	Heifer born on or after 1st December 1947 and before 1st March 1948	12	8	4	2
40/-	80/-	18	Heifer born on or after 1st March 1948	12	8	4	2
			¹ Fife and Kinross Perpetual Gold Challenge Cup, value £500, for best Animal in the Aberdeen- Angus Classes, "Extra Stock" eligible to compete.				
			² Silver Cup, value £75, for best Group of Aberdeen- Angus Cattle, consisting of one Bull and two Females, "Extra Stock" not eligible to compete. The Cup to become the property of an Exhibitor who shall win it three times, not necessarily in succession.				
			³ Silver Cup, value £80, for best Aberdeen-Angus Bull born on or after 1st December 1946, to become the property of an Exhibitor who shall win it three times, not necessarily in succession.				

¹ This Cup, along with an endowment of £400, was subscribed for by the Counties of Fife and Kinross in commemoration of the Society's first Show at Cupar, Fife, in 1912. This year the Cup is offered for the best Aberdeen-Angus animal. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. Under the original conditions of the award the winner of the Cup on each occasion was entitled to receive a miniature replica in silver as a memento of his winning the Cup. In view of the prohibitive cost of such a replica at the present time, the Society reserves the right to award, in place of the replica, a large Silver Medal and a sum equivalent to the free annual income of the Fund.

² Given by Mr J. E. Kerr of Harviestoun, Dollar. A Silver Medal will be given by the Society to the winner as a memento of his winning the Cup.

³ Given by the late Senor Eduardo Estanguet, Argentina.

ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
		CATTLE				
		ABERDEEN-ANGUS—continued	£	£	£	£
		Breeder of best Bull of any age in the four Classes ("Extra Stock" not eligible to compete) —The Silver Medal.				
		¹ Ballindalloch Challenge Cup, value £110, for the best Bull of any age in the four Classes.				
		Exhibitor of the Winner of the Ballindalloch Challenge Cup—The Silver Medal.				
		Breeder (if not also the Exhibitor) of the Winner of the Ballindalloch Challenge Cup—The Silver Medal.				
		² Harviestoun Challenge Cup, value £75, for the best Cow of any age in Classes 14, 15, and 16.				
		Exhibitor of the Winner of the Harviestoun Challenge Cup—The Silver Medal.				
		Breeder (if not also the Exhibitor) of the Winner of the Harviestoun Challenge Cup—The Silver Medal.				
		³ Silver Cup, value £75, for the best Female Animal of the Aberdeen-Angus breed, to become the property of an Exhibitor who shall win it four times, not necessarily in succession. "Extra Stock" eligible to compete.				
		⁴ Champion Medal, for best Animal in the Breeding Classes, breeding animals shown as "Extra Stock" eligible to compete.				
		PRIZE MONEY BY SOCIETY . . .	£291			

¹ "The Ballindalloch Challenge Cup," value £110, is offered for the best Bull of any age in the Aberdeen-Angus Classes. This Cup was presented by the late Sir George Macpherson Grant, Bt. The Cup will become the property of the Exhibitor who shall win it five times, not necessarily in succession. The Exhibitor and Breeder of the successful animal each year will receive the Society's Silver Medal, with suitable inscription.

² "The Harviestoun Challenge Cup," value £75, for the best Cow of any age (Heifers excluded), was presented by Mr J. E. Kerr of Harviestoun, Dollar. The Cup will become the property of the Exhibitor who shall win it five times, not necessarily in succession. The Exhibitor and Breeder of the successful animal each year will receive the Society's Silver Medal, with suitable inscription.

³ Presented by the late Mr Falconer L. Wallace of CandaCraig, Strathdon. A Silver Medal will be given by the Society to the winner as a memento of his winning the Cup.

⁴ Given by the Aberdeen-Angus Cattle Society.

ENTRY FEES			CLASS	CATTLE GALLOWAY	PREMIUMS			
Members	Non-Members				First	Second	Third	Fourth
					£	£	£	£
				Judge: John Nicholson				
				<i>President's Champion Medal for best Galloway Animal</i>				
40/-	80/-	19		Bull born before 1st December 1947	20	12	8	4
40/-	80/-	20		Bull born on or after 1st December 1947	15	10	5	3
40/-	80/-	21		Cow in milk, born before 1st December 1946	15	10	5	3
40/-	80/-	22		Cow or Heifer born on or after 1st December 1946 and before 1st December 1947	12	8	4	2
40/-	80/-	23		Heifer born on or after 1st December 1947 and before 1st March 1948	12	8	4	2
40/-	80/-	24		Heifer born on or after 1st March 1948	12	8	4	2
¹ Edinburgh Corporation Perpetual Gold Challenge Cup, value £225, for best Galloway Animal. "Extra Stock" eligible to compete. ² Dr Gillespie Memorial Challenge Trophy, value £120, for best Galloway Animal in the Breeding Classes, breeding animals shown as "Extra Stock" eligible to compete—see conditions below. ³ Silver Challenge Cup, value £75, for best animal of the sex opposite to that of the winner of the Dr Gillespie Memorial Challenge Trophy, "Extra Stock" eligible to compete. Breeder of best Bull of any age in the two Classes ("Extra Stock" not eligible to compete) — The Silver Medal.								
PRIZE MONEY BY SOCIETY					£188			

¹ This Cup was presented by the City of Edinburgh to commemorate the Society's Hundredth Show. This year the Cup is offered for best Galloway animal. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so.

² This Trophy was presented by the Galloway Cattle Society of Great Britain and Ireland for the best Galloway animal registered in the Galloway Cattle Society's Herd-Book, entered in any of the breeding classes, at the Show at which it may be competed for. The winner of the Trophy shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. The winner on each occasion will receive the Galloway Cattle Society's Silver Medal as a memento of his winning the Trophy.

³ This Cup was presented by the Galloway Cattle Society to commemorate the Hundredth Show of the Highland and Agricultural Society, to be awarded to best animal of the sex opposite to that of the winner of the Dr Gillespie Memorial Trophy registered in the Galloway Cattle Society's Herd-Book. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so.

ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
			£	£	£	£
CATTLE						
BELTED GALLOWAY						
Judge: John Drynan						
<i>President's Champion Medal for best Belted Galloway Animal</i>						
40/-	80/-	25	Bull, any age	12	8	4 2
40/-	80/-	26	Cow or Heifer born before 1st December 1946, in Milk or in Calf; if in calf and not in milk, to calve on or before 1st December of the year of the Show	12	8	4 2
40/-	80/-	27	Heifer born on or after 1st December 1946	12	8	4 2
¹ Knockbrex Challenge Cup, value £75, for the best Belted Galloway Animal, "Extra Stock" eligible to compete. ² The Ian Hamilton Silver Challenge Cup, value £75, for the best Belted Galloway Animal of the sex opposite to that of the winner of the Knockbrex Challenge Cup, "Extra Stock" eligible to compete. The winning animal to be registered or eligible for registration in the Dun and Belted Galloway Herd-Book. Breeder of best Bull in Class 25 ("Extra Stock" not eligible to compete)—The Silver Medal.						
PRIZE MONEY BY SOCIETY			£78			

¹ This Cup was presented by the late Mrs Brown, Kirkbrex, Glasgow, for the best Belted Galloway animal registered in the Dun and Belted Galloway Cattle Breeders' Association Herd-Book, entered in any of the breeding classes, at the Show at which it may be competed for. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. The winner on each occasion will receive a Silver Medal as a memento of his winning the Cup.

² This Cup was presented by the late General Sir Ian Hamilton, G.C.B. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so.

ENTRY FEES			CLASS	PREMIUMS			
Members	Non- Members	First		Second	Third	Fourth	
		£		£	£	£	
CATTLE							
HIGHLAND							
Judge : John A. Cameron							
<i>President's Champion Medal for best Highland Animal</i>							
40/-	80/-	28	Bull born before 1st December 1947	20	12	8	4
40/-	80/-	29	Bull born on or after 1st December 1947	15	10	5	3
40/-	80/-	30	Cow of any age with Calf at foot	15	10	5	3
40/-	60/-	31	Heifer born on or after 1st December 1945 and before 1st December 1946	12	8	4	2
40/-	80/-	32	Heifer born on or after 1st December 1946 and before 1st December 1947	12	8	4	2
40/-	80/-	33	Heifer born on or after 1st December 1947	12	8	4	2
¹ Perpetual Victory Challenge Cup, approximate value £115, for the best Animal in the Male Classes, "Extra Stock" eligible to compete. Breeder of best Bull in Classes 28 and 29 ("Extra Stock" not eligible to compete)—The Silver Medal.							
¹ Perpetual Victory Challenge Cup, approximate value £75, for the best Animal in the Female Classes, "Extra Stock" eligible to compete.							
PRIZE MONEY BY SOCIETY				£188			

ENTRY FEES		CLASS		PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
			CATTLE				
			HEREFORD	£	£	£	£
			Judge : R. S. de Q. Quincey				
			<i>President's Champion Medal for best Hereford Animal</i>				
40/-	80/-	34	Bull born before 1st September 1947	15	10	5	3
40/-	80/-	35	Bull born on or after 1st September 1947	12	8	4	2
40/-	80/-	36	Heifer born on or after 1st September 1946	10	5	3	2
			[In the event of there being less than six Exhibitors and an average of three entries per Class, the Classes for Hereford Cattle will be cancelled.]				
			PRIZE MONEY BY SOCIETY	£39	10		
			¹ CONTRIBUTED	39	10		

¹ Given by the Hereford Herd Book Society. The Herd Book Society is willing to pay one half the road and rail charges over 50 miles for animals entered in these Classes.

ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
			£	£	£	£
CATTLE						
AYRSHIRE						
Judges: Duncan M'Alister; A. W. M. Sillars						
<p>To be eligible for competition in the Ayrshire Cattle Classes, animals must have an authenticated Milk Yield, or in the case of Younger Females and Bulls (including Heifers which, at date of closing of entries, have been less than 305 days in milk) an authenticated Milking Pedigree, in accordance with the following standards:—</p> <p>1. Animals entered in Classes 37, 38, and 39 must have produced as a COW at least 8500 lb. of milk of not less than 3·8 per cent butter fat in 305 days, or as a Heifer at least 7000 lb. of milk of not less than 3·8 per cent butter fat in 305 days.</p> <p>Heifers entered in Class 38, less than 305 days in milk at closing of entries, must qualify on Milking Pedigree.</p> <p>2. The dam and dam of sire of animals entered in Classes 40, 41, 42, 43, 44, or 45 must have similar qualifications.</p> <p>3. Official Milk Records may be obtained from Mr James A. Paterson, Superintendent-Secretary, Scottish Milk Records Association, 3 Racecourse Road, Ayr, and must be lodged along with entries.</p> <p>4. In the case of an Exhibitor founding on the Milk Yields of any animal, or animals, made in England, such Exhibitor must forward a Certificate of Milk Yield from the Milk Record Officer of the area in which the herd was milk-recorded. This Certificate must show the yield of milk and the percentage of butter fat, and must also show the number of Butter Fat Tests carried out. Animals, to qualify, must have had not less than four Butter Fat Tests during the yield period.</p> <p>5. The authenticated Milk Yields and authenticated Milking Pedigrees will NOT appear in the catalogue but will be made available to the Judges before they commence to judge the Classes.</p> <p>N.B.—Certificates above referred to must be lodged with Entries.</p> <p>Under the Society's General Regulations an animal of any age that has had a calf is classed as a Cow. In the above Regulations, where reference is made to a Heifer in Milk this means an animal which is in her first lactation.</p>						
<i>President's Champion Medal for best Ayrshire Animal</i>						
40/-	80/-	37	1 Cow in Milk,* born before 1946	20	12	8 4
40/-	80/-	38	1 Cow in Milk,* born on or after 1st January 1946	20	12	8 4
40/-	80/-	39	1 Cow of any age in Calf,* and due to calve before 1st December of the year of the Show	15	10	5 3
40/-	80/-	40	Heifer* born on or after 1st June 1946, in Calf and due to calve before 1st December of the year of the Show	12	8	4 2
40/-	80/-	41	Heifer* born in 1947	12	8	4 2
40/-	80/-	42	Heifer born in 1948	12	8	4 2

* See Rules 33, 42, and 71.

1 Cows in these Classes must have produced a calf within fifteen months prior to the Show.

ENTRY FEES			CLASS	CATTLE				PREMIUMS			
Members	Non-Members							First	Second	Third	Fourth
				AYRSHIRE—continued							
40/-	80/-	43		Bull born before 1947	.	.	.	£ 15	£ 10	£ 5	£ 3
40/-	80/-	44		Bull born in 1947	.	.	.	12	8	4	2
40/-	80/-	45		Bull born in 1948	.	.	.	10	6	4	2
<p>¹The J. P. Brown Perpetual Challenge Cup, value £75, for best Animal in the Ayrshire Cattle Classes, "Extra Stock" eligible to compete.</p> <p>²Trent Perpetual Challenge Trophy, value £75, for the best Group of Three Animals of the Ayrshire breed, consisting of three females in milk or in calf, bred by Exhibitor. "Extra Stock" eligible to compete.</p> <p>³Cowhill Champion Cup, approximate value £45, for best Animal of the Ayrshire breed, entered with a number in the Herd Book. The Cup to be won three times, not necessarily in succession, by the same person with different animals, before becoming the property of the winner. No animal which has already won the Cup shall be eligible to compete.</p> <p>¹Special Prize of £10 for the best Female Animal of the Ayrshire breed entered with a number in the Ayrshire Cattle Herd Book prior to 1st June 1949. "Extra Stock" eligible to compete.</p> <p>Breeder of best Bull of any age in Classes 43, 44, and 45 ("Extra Stock" not eligible to compete) —The Silver Medal.</p> <p>¹Special Prize of £10 for the best Male Animal of the Ayrshire breed entered with a number in the Ayrshire Cattle Herd Book prior to 1st June 1949. "Extra Stock" eligible to compete.</p>											
PRIZE MONEY BY SOCIETY								£280			
CONTRIBUTED								20			

¹ This Cup was presented by Mrs Brown, Dipple, in memory of her husband, the late Mr J. P. Brown, Dipple. This year the Cup is offered for the best animal in the Ayrshire Cattle Classes. A Silver Medal will be given by the Society to the winner as a memento of his winning the Cup.

² Presented by Messrs Boots Pure Drug Company Ltd. A miniature replica of the Trophy will be given by the donors to the winner each year as a memento of his winning the Trophy.

³ Presented by the late Major Henry Keswick, Cowhill Tower, Dumfries, to the Ayrshire Cattle Herd Book Society, to be competed for annually at the Shows of The Royal Highland and Agricultural Society of Scotland. Messrs James Howie & Sons, Muirside, Dumfries, who won this Cup outright in 1934, have kindly re-presented the Cup to the Society for competition on the same conditions as formerly.

⁴ Given by the Ayrshire Cattle Herd Book Society.

ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
			£	£	£	£
CATTLE						
BRITISH FRIESIAN						
Judges: William W. M'Kendrick; Alec Steel						
To be eligible for competition in the British Friesian Classes animals must comply with the following standards:—						
<i>Cow Classes.</i> —Cows must either be entered in the Register of Merit of the British Friesian Cattle Society or must have achieved a qualifying lactation of at least 1000 gallons of milk at not less than 8.50 per cent butter fat.						
<i>Heifer Classes.</i> —Heifers must be out of Dams either entered in the Register of Merit or that have achieved a qualifying lactation of at least 1000 gallons of milk at not less than 8.50 per cent butter fat.						
<i>Bull Classes.</i> —The Dam and the Dam of the Sire must either be entered in the Register of Merit or must have achieved a qualifying lactation of at least 1000 gallons of milk at 8.50 per cent butter fat. Open also to Bulls whose parents are entered in the Society's Register of Merit, or to Bulls that are themselves R.M.						
Official Milk Records, or evidence of entry in the Register of Merit, must be lodged along with the entries. Official Milk Records may be obtained from Mr James A. Paterson, Superintendent-Secretary, Scottish Milk Records Association, 3 Racecourse Road, Ayr, or other appropriate Milk Recording bodies.						
<i>President's Champion Medal for best British Friesian Animal</i>						
40/-	80/-	46	¹ Cow in Milk,* born in or before 1945	20	12	8 4
40/-	80/-	47	¹ Cow in Calf,* and not in Milk, born in or before 1946	15	10	5 3
40/-	80/-	48	¹ Cow in Milk,* born in 1946 or 1947	20	12	8 4
40/-	80/-	49	Heifer* born in 1947	12	8	4 2
40/-	80/-	50	Heifer born in 1948, before 1st July	12	8	4 2
40/-	80/-	51	Heifer born in 1948, on or after 1st July	12	8	4 2
40/-	80/-	52	Bull born in or before 1946	15	10	5 3
40/-	80/-	53	Bull born in 1947	12	8	4 2
40/-	80/-	54	Bull born in 1948	12	8	4 2
² Silver Challenge Cup, value £80, for the best Group of Three Animals. The Cup to become the property of an Exhibitor winning it three times, not necessarily in succession. "Extra Stock" eligible to compete.						
³ The George Hobson Silver Challenge Cup, value £50, for the best two Cows of the British Friesian breed, in milk or forward in calf, bred by Exhibitor, each cow having an official lactation of not less than 1000 gallons of milk and 3.5 per cent butter fat in not more than 365 days.						

* See Rules 33, 42, and 71.

¹ Cows in these Classes must have produced a calf within fifteen months prior to the Show.² Given by the British Friesian Cattle Society.³ Presented by the Scottish Friesian Breeders' Club. A Silver Medal will be given by the Society to the winner as a memento of his winning the Cup.

ENTRY FEES		CLASS	PREMIUMS		
Members	Non-Members		First	Second	Third
			£	£	£
<p style="text-align: center;">CATTLE</p> <p style="text-align: center;">BRITISH FRIESIAN—continued</p> <p>¹ The MacRobert Perpetual Challenge Bell, value 150 guineas, for the best Animal in the British Friesian Classes, bred by Exhibitor, and registered in or eligible for entry in the British Friesian Cattle Society's Herd-Book. "Extra Stock" eligible to compete.</p> <p>Champion Medal given by the British Friesian Cattle Society for the best Female Animal exhibited. "Extra Stock" eligible to compete.</p> <p>Breeder of Best Bull of any age in Classes 52, 53, and 54 ("Extra Stock" not eligible to compete) — The Silver Medal.</p> <p>Champion Medal given by the British Friesian Cattle Society for the best Male Animal exhibited. "Extra Stock" eligible to compete.</p> <p style="text-align: right;">PRIZE MONEY BY SOCIETY . . . £237 12</p> <p style="text-align: right;">² CONTRIBUTED 46 8</p>					

¹ Presented by Lady MacRobert, J.P., B.Sc., F.G.S., of Douneside, Tarland. The winner will receive from Lady MacRobert a miniature replica in silver of the Bell to commemorate his success. This Bell is copied from the famous Bell of St Fillans, now in the Royal Scottish Museum, and reproduced by permission of the authorities.

² Given by the British Friesian Cattle Society.

ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
			£	£	£	£
CATTLE						
JERSEY						
Judge: John G. Bell						
<i>President's Champion Medal for best Jersey Animal</i>						
40/-	80/-	55	¹ Cow in Milk,* which has produced two or more calves			
40/-	80/-	56	¹ Cow in Milk,* which has produced her first and only calf at under the age of 2½ years			
40/-	80/-	57	¹ Cow* dry and in calf, any age			
40/-	80/-	58	Bull, any age			
			12	8	4	—
			12	8	4	—
			12	8	4	—
			12	8	4	—
² Silver Challenge Cup, value £30, for the best Female Animal in the Jersey Cattle Classes. "Extra Stock" eligible to compete.						
³ Silver Challenge Cup, value £25, for the best Bull in the Jersey Cattle Classes. "Extra Stock" eligible to compete.						
⁴ The Corsar Perpetual Challenge Cup for the best Bull judged on the merits of three of his registered progeny (one of which may be a Bull) bred by the Exhibitor, exhibited in the Jersey Classes, the sire not to be shown with the Group.						
Champion Prize of £5 given by the English Jersey Cattle Society for the best Female Animal exhibited. "Extra Stock" eligible to compete.						
Champion Prize of £5 given by the English Jersey Cattle Society for the best Male Animal exhibited. "Extra Stock" eligible to compete.						
Breeder of Best Bull in Class 58 ("Extra Stock" not eligible to compete)—The Silver Medal.						
PRIZE MONEY BY SOCIETY			£81			
⁵ CONTRIBUTED			25			

* See Rules 33, 42, and 71.

¹ Cows in these Classes must have produced a calf within fifteen months prior to the Show. Presented by The Baroness Burton. A Silver Medal will be given by the Society to the winner as a memento of his winning the Cup.² Presented by Lady Lovat. A Silver Medal will be given by the Society to the winner as a memento of his winning the Cup.³ Presented by Mr Charles Corsar, Rosely, Arbroath, who will give a replica each year to the winner of the Cup.⁴ Contributed by the English Jersey Cattle Society.

ENTRY FEES		CLASS	PREMIUMS		
Members	Non-Members		First	Second	Third
			£	£	£
CATTLE					
FAT CATTLE					
Judge: John Nicholson					
(To be judged at 2.30 P.M. on Tuesday, 21st June)					
<i>President's Champion Medal for best Fat Animal</i>					
40/-	80/-	59	Bullock , any pure breed or cross, born on or after 1st December 1946 and before 1st December 1947		
			9	4	—
40/-	80/-	60	Bullock , any pure breed or cross, born on or after 1st December 1947		
			9	4	—
40/-	80/-	61	Heifer , any pure breed or cross and of any age		
			9	4	—
Animals entered in Classes 59, 60, and 61 must be home-bred (i.e., bred in Great Britain or Northern Ireland) and must have passed a tuberculin test as laid down in Rule 2. Exhibitors must state the breed of the sire or dam when making their entries.					
PRIZE MONEY BY SOCIETY			£39		

ENTRY FEES		CLASS	PREMIUMS		
Members	Non-Members		First	Second	Third
			£	£	£
CATTLE					
HILL CATTLE¹					
Judges : To be appointed					
40/-	80/-	62	<p>The following prizes are offered for the best beef breeding herds of Hill Cattle within the Show Division—the Counties of Angus (Western District), Fife, Kinross, and Perth (Perth Show District). The competition will be open to herds of breeding cows, not less than 10 in number, which are in receipt of the Hill Cattle Subsidy.</p> <p>The Judges will inspect the whole herd on which the subsidy has been paid, and will pay attention to suitability of type of cattle for the land on which they are being bred and the percentage of calves following the dams. Judging of the herds entered will take place on the farms between 15th August and 15th September 1949.</p>		
			20	15	10
The closing date for entries is 1st July 1949.					
<p>PRIZE MONEY BY THE SOCIETY £54</p>					
<p>PRIZE MONEY BY SOCIETY . . . £1751 2</p> <p>CONTRIBUTED 200 18</p> <p>CUPS, MEDALS, &c. 3105 0</p> <p>Total Prizes for Cattle . . . £5057 0</p>					
[See Note as to EXTRA STOCK, p. 55.]					

These animals need not comply with Rule 2 regarding a tuberculin test.

ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
			£	£	£	£
* HORSES						
CLYDESDALE						
Judges: John C. Drennan; Robert C. Paterson; James Sands; Andrew Sommerville						
STALLION AND COLT						
(To be judged at 9.30 A.M. on Tuesday, 21st June)						
<i>President's Champion Medal for best Clydesdale Stallion or Colt</i>						
70/-	140/-	63	Stallion or Entire Colt born in or before 1946	25	20	15 6
70/-	140/-	64	Entire Colt born in 1947	25	20	15 6
55/-	110/-	65	Entire Colt born in 1948	20	12	8 4
¹ The James Kilpatrick Perpetual Challenge Cup for best Clydesdale Stallion or Colt, "Extra Stock" eligible to compete. Breeder of best Male Animal of any age in the above Classes ("Extra Stock" not eligible to compete)—The Silver Medal. ² William Taylor Memorial Prize of £10 and Certificate to the Breeder of the best Clydesdale Colt entered in Classes 64 and 65.						
PRIZE MONEY BY SOCIETY				£176		
CONTRIBUTED PRIZE				10		

* For prizes given by the Society, no animal is allowed to enter in more than one Class, except that horses entered in other Classes may also compete in the Jumping and Hackney in Harness Classes.

¹ Presented by Mr James Kilpatrick, Craigie Mains. The Cup is offered for the best Clydesdale Stallion or Colt registered in the Clydesdale Stud-Book, entered in any of the Clydesdale Horse Classes at the Show at which it may be competed for. No Stallion rising five years old or upwards will be allowed to compete for this Cup unless proof be furnished that he has during the preceding season left at least 35 per cent of the mares served by him in foal. No animal which has previously won the Cup shall be eligible to compete. The animal winning this Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. Under the original conditions of award the winner on each occasion was entitled to receive a miniature replica as a memento of his winning the Cup. In view of the prohibitive cost of such a replica at the present time the Society reserves the right to award, in place of the replica, a large Silver Medal and a sum equivalent to the free annual income of the Fund.

² Given by William Taylor Memorial Committee.

Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 39.

ENTRY FEES		CLASS	HORSES	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
			CLYDESDALE—continued	£	£	£	£
			GELDING				
			Got by a Registered Clydesdale Stallion				
			<i>(To be judged at 3 P.M. on Tuesday, 21st June)</i>				
			<i>President's Champion Medal for best Clydesdale Gelding</i>				
55/-	110/-	66	Gelding born before 1946	20	12	8	4
55/-	110/-	67	Gelding born in 1946	20	12	8	4
55/-	110/-	68	Gelding born in 1947	20	12	8	4
¹ The James Clark Silver Challenge Cup, value £80, for best Clydesdale Gelding, to become the property of an Exhibitor who shall win it four times with different animals, but not necessarily in succession. "Extra Stock" eligible to compete. No animal which has already won the Cup is eligible to compete.							
PRIZE MONEY BY SOCIETY . . . £132							

¹ Given by Mr James Clark, Windlaw Farm, Carmunnock.

Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 39.

ENTRY FEES		CLASS	HORSES	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
				£	£	£	£
			CLYDESDALE—continued				
			MARE AND FILLY				
			<i>(To be judged at 9.30 A.M. on Tuesday, 21st June)</i>				
			<i>President's Champion Medal for best Clydesdale Mare or Filly</i>				
70/-	140/-	69	Mare of any age, with Foal at foot, or due to foal before 31st July 1949	25	18	12	5
55/-	110/-	70	Yeld Mare born before 1946	20	12	8	4
55/-	110/-	71	Yeld Mare or Filly born in 1946	20	12	8	4
55/-	110/-	72	Filly born in 1947	20	12	8	4
55/-	110/-	73	Filly born in 1948	20	12	8	4
			¹ Cawdor Challenge Cup for best Clydesdale Mare or Filly, "Extra Stock" eligible to compete.				
			² The "Angus" Perpetual Silver Challenge Cup, value £80, for the best Clydesdale Mare or Filly, "Extra Stock" eligible to compete.				
			PRIZE MONEY BY SOCIETY £236				
			Total Prize Money for Clydesdale Horses, £554				

¹ This Cup is offered by the Clydesdale Horse Society of Great Britain and Ireland (subject to the conditions of that Society) for the best Clydesdale Mare or Filly registered in the Clydesdale Stud-Book, entered in any of the Clydesdale Horse Classes at the Show at which it may be competed for. The Cup must be won four times by an Exhibitor with different animals (but not necessarily in consecutive years) before it becomes his absolute property. No animal which has won a Cawdor Cup shall be eligible to compete. The animal winning this Cup must be certified free from hereditary disease. The winner of the Cup, other than the absolute winner, shall, before delivery thereof is made to him, give security to the Clydesdale Horse Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. Until the Cup be won outright, the winner on each occasion will receive the Clydesdale Horse Society's Silver Medal as a memento of his winning the Cup.

² This Cup was presented by the Angus Agricultural Association to commemorate the holding of the Society's Annual Show at Dundee in 1933. On this occasion the Cup is offered for the best Clydesdale Mare or Filly. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so.

Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 39.

ENTRY FEES		CLASS	PREMIUMS			
Members	Non-Members		First	Second	Third	Fourth
			£	£	£	£
HORSES						
SUFFOLK						
Judge: G. Philip Woodward						
(To be judged at 3 P.M. on Tuesday, 21st June)						
President's Champion Medal for best Suffolk Horse						
55/-	110/-	74	Mare, born in or before 1946, registered or eligible for registration in Suffolk Stud-Book			
			15	10	5	3
55/-	110/-	75	Gelding, born in or before 1946, by a registered Suffolk sire			
			15	10	5	3
[In the event of there being less than six Exhibitors and an average of three entries per Class, the Classes for Suffolk Horses will be cancelled.]						
PRIZE MONEY BY SOCIETY			£33			
¹ CONTRIBUTED			33			
PERCHERON						
Judge: Allan L. Alston						
(To be judged at 3 P.M. on Tuesday, 21st June)						
President's Champion Medal for best Percheron						
70/-	140/-	76	Mare of any age			
			20	12	7	4
55/-	110/-	77	Gelding, born in 1946 or 1947, got by a registered Percheron stallion			
			15	9	6	4
[In the event of there being less than six Exhibitors and an average of three entries per Class, the Classes for Percheron Horses will be cancelled.]						
PRIZE MONEY BY SOCIETY			£38 10			
² CONTRIBUTED			38 10			

¹ Given by the Suffolk Horse Society.² Given by the Percheron Horse Society.

ENTRY FEES		CLASS	HORSES HUNTERS	PREMIUMS		
Members	Non-Members			First	Second	Third
			Judge: H. J. Davies, M.F.H. (Classes 78 to 81 to be judged at 10 A.M. on Tuesday, 21st June) <i>President's Champion Medal for best Hunter</i> (Classes 78 to 83)	£	£	£
70/-	140/-	78	Hunter Brood Mare, with Foal at foot, or due to foal before 31st July 1949.	20	10	5
55/-	110/-	79	Yeld Mare, Filly, or Gelding born in 1946—in hand	15	7	3
55/-	110/-	80	Yeld Mare, Filly, or Gelding born in 1947—in hand	15	7	3
55/-	110/-	81	Filly, Colt, or Gelding born in 1948—in hand	15	7	3
			Special Prizes for Foals shown with their dams in Class 78	4	2	1
			(Classes 82 to 84 to be judged at 2.30 P.M. on Tuesday, 21st June)			
55/-	110/-	82	Mare or Gelding, any age, to carry 14 stone and over—in saddle	20	12	5
55/-	110/-	83	Mare or Gelding, any age, to carry under 14 stone—in saddle	20	12	5
55/-	110/-	84	Hack of Hunter Type, any age, not exceeding 15.2 hands—in saddle	15	7	3
			¹ Dumfries Centenary Silver Challenge Cup, value £150, for best Hunter in Classes 82, 83, and 84. The Cup to become the property of an Exhibitor who shall win it three times, not necessarily in succession, at Shows at which there are not less than three Saddle Classes. "Extra Stock" not eligible to compete.			
			² The Manderston Perpetual Silver Challenge Cup, value £250, for best Hunter in the Breeding Classes. "Extra Stock" eligible to compete.			
			³ Best Hunter Filly, entered in Classes 79, 80, and 81, registered with a number in the Hunter Stud-Book, or the entry tendered within one month of the award—Champion Silver Medal.			
			PRIZE MONEY BY SOCIETY	£216		

¹ Presented by Members of the Dumfriesshire Hunt in 1930 to commemorate the centenary of the Highland Society's first Show at Dumfries in 1830.

² Presented by Major C. W. H. Baillie, Manderston, Duns.

³ Given by the Hunters' Improvement and National Light Horse Breeding Society.

Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 39.

ENTRY FEES		CLASS	HORSES		PREMIUMS			
Members	Non-Members				First	Second	Third	Fourth
			RIDING PONIES					
			Judge : Captain R. MacLean					
			(Classes 85 to 89 to be judged at 10 A.M. on Wednesday, 22nd June)		£	£	£	£
10/-	10/-	85	Pony Mare , 14 hands or under, with Foal at foot, or in foal		5	3	2	
10/-	10/-	86	Pony , 1, 2 or 3 years old, 13.2 hands or under, in hand		5	3	2	
			Special Prize of £5, given by Miss Stewart, Arndean, Dollar, for the best Pony in Classes 85 and 86.					
10/-	10/-	87	Mare or Gelding , any age, over 13.2 hands and not exceeding 14.2 hands—in saddle		5	3	2	
10/-	10/-	88	Mare or Gelding , any age, over 12 hands and not exceeding 13.2 hands—in saddle—to be ridden by boy or girl not exceeding 14 years of age		5	3	2	
10/-	10/-	89	Mare or Gelding , any age, not exceeding 12 hands—in saddle—to be ridden by boy or girl not exceeding 12 years of age		5	3	2	
			NOTE:—In Classes 88 and 89 the riders must be unaccompanied in the Show ring by attendants.					
			[Ponies in Classes 85 to 89 to be exhibited on Wednesday only. They must be in the Showyard not later than 9 A.M. on Wednesday and may leave immediately after the afternoon Parade. Boxes are not provided for these ponies.]					
			PRIZE MONEY BY SOCIETY . . . £50					
			CONTRIBUTED 5					
			HILL PONIES					
			Judge : Captain R. MacLean					
			(To be judged after the Riding Ponies on Wednesday, 22nd June)					
10/-	10/-	90	Hill Pony (Highland, Fell or Dales) , any age, to be shown in saddle		8	5	3	2
			¹ Perpetual Silver Challenge Cup, value £38, for the best Hill Pony of riding type shown in Class 90. "Extra Stock" eligible to compete.					
			PRIZE MONEY BY SOCIETY . . . £18					
			[Ponies in the above Class to be exhibited on Wednesday only. They must be in the Showyard not later than 9 A.M. on Wednesday and may leave immediately after the afternoon Parade. Boxes are not provided for these ponies.]					

¹ Presented by the late Colonel Sir Henry R. Fairfax-Lucy, Bt., C.B., and Lady Fairfax-Lucy, Maxton, St Boswells. A small Cup will be given by Lady Ramsay Fairfax-Lucy to the winner as a memento of his winning the Cup.

Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 39

ENTRY FEES		CLASS	HORSES	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
				£	£	£	£
			* 1 HIGHLAND and WESTERN ISLAND PONIES				
			Judge: Thomas Wooley				
			(To be judged at 2 P.M. on Tuesday, 21st June)				
			<i>President's Champion Medal for best Highland or Western Island Pony</i>				
55/-	110/-	91	Stallion, born in or before 1945, not exceeding 14.2 hands	15	9	6	4
55/-	110/-	92	Stallion, born in 1946 or 1947, not exceeding 14.2 hands	15	9	6	4
55/-	110/-	93	Mare, born in or before 1945, not exceeding 14.2 hands, with Foal at foot, or due to foal before 31st July 1949	15	9	6	4
55/-	110/-	94	Yeld Mare, born in or before 1945, not exceeding 14.2 hands	15	9	6	4
55/-	110/-	95	Filly, born in 1946 or 1947, not exceeding 14.2 hands	15	9	6	4
			² Kinmonth Perpetual Gold Challenge Quaich, value £150, for best Highland or Western Island Pony. An animal winning the Quaich will become ineligible again to compete.				
			³ Special Prizes given by Highland Pony Society for three best Male Animals not exceeding 14.2 hands entered in Classes 91 and 92. Former Champions at Highland Shows not eligible to compete	20	10	5	-
			³ Special Prizes given by Highland Pony Society for three best Female Animals not exceeding 14.2 hands entered in Classes 93, 94, and 95. Former Champions at Highland Shows not eligible to compete.	12	8	5	-
			PRIZE MONEY BY SOCIETY . . . £120				
			CONTRIBUTED PRIZES . . . 110				

* See Rule 28.

¹ The Department of Agriculture for Scotland gives £50 towards prizes for Highland and Western Island Ponies.

² This Quaich—along with a sum of money to provide a miniature replica in silver annually—was presented by Mrs Moncrieff Wright, Kinmonth, Bridge-of-Earn, in memory of her husband, the late John Moncrieff Wright of Kinmonth. The winner of the Quaich shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. Under the original conditions of award the winner of the Quaich on each occasion was entitled to receive a miniature replica in silver as a memento of his winning the Quaich. In view of the prohibitive cost of such a replica at the present time the Society reserves the right to award, in place of the replica, a large Silver Medal and a sum equivalent to the free annual income of the Fund.

³ The animals winning these Prizes must be entered or accepted for entry in the Highland Section of the National Pony Stud-Book. Competition to be strictly confined to animals passed sound and free from hereditary disease.

Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 39.

ENTRY FEES		CLASS	HORSES	PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
				£	£	£	£
			HORSES				
			SHETLAND PONIES				
			Judge: Montgomery Smith				
			(To be judged at 2 P.M. on Tuesday, 21st June)				
			(All to be shown in hand)				
			<i>President's Champion Medal for best Shetland Pony</i>				
50/-	100/-	96	Stallion, not exceeding 10½ hands, born before 1946	10	6	4	2
50/-	100/-	97	Entire Colt, not exceeding 10½ hands, born in 1946 or 1947	10	6	4	2
50/-	100/-	98	Mare, not exceeding 10½ hands, with Foal at foot, or due to foal before 31st July 1949	10	6	4	2
50/-	100/-	99	Yeld Mare, not exceeding 10½ hands	10	6	4	2
50/-	100/-	100	Filly, not exceeding 10½ hands, born in 1946 or 1947	10	6	4	2
			¹ Perpetual Silver Challenge Cup, value £75, for best Group of Shetland Ponies drawn from the ordinary Classes, consisting of one male and two females. "Extra Stock" eligible to compete.				
			² Special Prize of £5 for the best Shetland Pony of the sex opposite to that of the winner of the President's Champion Medal, entered or eligible for entry in the Shetland Pony Stud-Book.				
			PRIZE MONEY BY SOCIETY . . . £110				
			¹ CONTRIBUTED 5				
			<hr/>				
			PRIZE MONEY BY SOCIETY . . . £1129 10				
			CONTRIBUTED 201 10				
			CUPS, MEDALS, &c. 823 0				
			Total Prizes for Horses . £2154 0				
			<hr/>				
			[See Note as to EXTRA STOCK, p. 55.]				

¹ Presented by a few members of the Shetland Pony Stud-Book Society.² Given by the Shetland Pony Stud-Book Society.

Stallions and Colts, 2 years old and upwards, must be licensed for stud purposes. See Rule 39.

JUMPING COMPETITIONS

(Held under the Rules and Regulations of the British Show Jumping Association.)

SPECIAL REGULATIONS

(See also the Regulations on pages 3 to 12)

1. Jumping Competitions will take place on the afternoons of Wednesday, Thursday, and Friday, 22nd, 23rd, and 24th June, and on the evenings of Wednesday and Thursday, 22nd and 23rd June.
2. Entries for all Competitions will close on Tuesday, 14th June.
3. *Entry Fees*.—Wednesday, Thursday and Friday afternoons, £1; Evening Jumping, 10s.
4. *Accommodation* for jumping horses will be provided as follows: Covered shed in which to stand during the day free of charge.
5. Horses entered for jumping only need not enter the Showyard till 12 noon on the day of Competition, and may leave the Showyard at the close of the jumping.

CONDITIONS

1. A time limit will be imposed for each Competition, and his will be notified prior to the commencement of the Competition.
2. All Competitors must be properly dressed, and a hard hat must be worn.

ENTRY FEE	CLASS		First £	Second £	Third £	Fourth £	Fifth £
20/-	1	Open Jumping Competition	30	20	15	10	5
WEDNESDAY.							
AFTERNOON.							
EVENING							
10/-	2	Juvenile Jumping Competition (Open) for ponies not exceeding 14.2 hands, to be ridden by a child born in or after 1933	15	10	5	3	2
THURSDAY.							
AFTERNOON.							
20/-	3	North East of Scotland Championship Jumping Competition. Only registered Horses or Ponies, the property of members of the British Show Jumping Association who have paid their subscriptions for 1949, may be entered for this Competition	30	20	15	10	5
A Challenge Cup will be awarded by The British Show Jumping Association.							
EVENING.							
10/-	4	Jumping Competition, confined to Competitors permanently resident in Scotland. The Horse or Pony to have been the property of the Competitor since 1st May 1949	20	10	5	3	2
FRIDAY.							
AFTERNOON.							
20/-	5	Open Jumping Competition	25	15	10	7	3
Total Prize Money for Jumping, £295.							

B.S.J.A. Rosettes will be awarded to the winners of each Jumping Competition, provided that the Horse or Pony is registered and owned by a member of the B.S.J.A.

Special Entry Forms for above Competitions to be had on application.

ENTRY Fees		CLASS	S H E E P				PREMIUMS			
Members	Non-Members		(To be judged at 9.30 A.M. on Tuesday, 21st June)				First	Second	Third	Fourth
			* BLACKFACE							
			Judges : Andrew D. Elliot ; Ian M'Diarmid				£	£	£	£
			<i>President's Champion Medal for best Blackface Sheep</i>							
30/-	60/-	101	Tup three shear and over	.	.	.	15	10	5	3
30/-	60/-	102	Tup two shear	.	.	.	15	10	5	3
30/-	60/-	103	Shearling Tup	.	.	.	15	10	5	3
30/-	60/-	104	Tup Lamb	.	.	.	7	4	2	-
30/-	60/-	105	Ewe above one shear (born before 1948), with Lamb at foot	.	.	.	12	8	4	2
30/-	60/-	106	Shearling Ewe or Gimmer (born in 1948)	.	.	.	12	8	4	2
30/-	60/-	107	Ewe Lamb	.	.	.	7	4	2	-
			¹ Paisley Perpetual Gold Challenge Cup, value £900, for best Blackface Sheep "Extra Stock" eligible to compete. ² The Charles Cadzow Memorial Cup, value £150, for best Group of Four Blackface Sheep, consisting of Ram, two shear or over, Shearling Ram, Ewe, and Gimmer, drawn from above Classes, "Extra Stock" eligible to compete. ³ The "James Archibald" Prize, of about £20, for the best Sheep in the Blackface Classes (excluding Lambs), "Extra Stock" eligible to compete.							
			PRIZE MONEY BY SOCIETY				£177			
			CONTRIBUTED PRIZE				20			

* Formal Declarations must be made at time of entry that the conditions as regards clipping, &c., have been strictly adhered to (see Rule 43).

¹ This Cup, along with an endowment of £600, was provided from money collected in Paisley by the late Provost Muir M'Kean, and is in commemoration of the Society's first Show at Paisley in 1913. This year the Cup is offered for the best Blackface Sheep. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender the same to the Society and deliver it at the Society's office when called upon to do so. Under the original conditions of award the winner of the Cup on each occasion was entitled to receive a miniature replica in silver as a memento of his winning the Cup. In view of the prohibitive cost of such a replica at the present time the Society reserves the right to award, in place of the replica, a large Silver Medal and a sum equivalent to the free annual income of the Fund.

² Presented by Mr Robert C. Paterson, Greenshields, Carnwath. The Cup will become the property of an Exhibitor who shall win it five times, not necessarily in succession.

³ This Prize consists of the annual free income from a fund of £600, gifted by the late David Archibald, Christchurch, New Zealand, to found a Prize to be offered at the Annual Shows of the Society in commemoration of his brother, the late James Archibald, Overhills, Stow.

ENTRY FEES		CLASS		PREMIUMS			
Members	Non-Members			First	Second	Third	Fourth
			SHEEP				
			CHEVIOT				
			Judge : Walter Elliot				
			<i>President's Champion Medal for best Cheviot Sheep</i>				
30/-	60/-	108	Tup above one shear	15	10	5	3
30/-	60/-	109	Shearling Tup	15	10	5	3
30/-	60/-	110	Tup Lamb	7	4	2	-
30/-	60/-	111	Ewe above one shear, with Lamb at foot	12	8	4	2
30/-	60/-	112	Shearling Ewe or Gimmer	12	8	4	2
30/-	60/-	113	Ewe Lamb	7	4	2	-
			¹ Borthwick Perpetual Challenge Cup, value £38, gilt by Mr J. Borthwick, for best Sheep in the Cheviot Classes. "Extra Stock" eligible to compete.				
			PRIZE MONEY BY SOCIETY				£144
			NORTH COUNTRY CHEVIOT				
			Judge : Major Gideon C. Rutherford				
			<i>President's Champion Medal for best North Country Cheviot Sheep</i>				
30/-	60/-	114	Tup above one shear	15	10	5	3
30/-	60/-	115	Shearling Tup	15	10	5	3
30/-	60/-	116	Tup Lamb	7	4	2	-
30/-	60/-	117	Ewe above one shear, with Lamb at foot	12	8	4	2
30/-	60/-	118	Shearling Ewe or Gimmer	12	8	4	2
30/-	60/-	119	Ewe Lamb	7	4	2	-
			² The Duke of Sutherland Perpetual Challenge Cup, value £50, for best North Country Cheviot Sheep. "Extra Stock" eligible to compete.				
			³ Silver Challenge Cup, value £25, for the best registered North Country Cheviot Sheep. The Cup will become the property of an Exhibitor who shall win in three times.				
			PRIZE MONEY BY SOCIETY				£144

¹ Given by the Cheviot Sheep Society.² Presented by His Grace The Duke of Sutherland, K.T., P.C.³ Presented by the North Country Cheviot Sheep Society.

ENTRY FEES			CLASS	SHEEP	PREMIUMS			
Members	Non-Members	First			Second	Third	Fourth	
		£			£	£	£	
BORDER LEICESTER								
Judge : John Jeffrey								
President's Champion Medal for best Border Leicester Sheep								
30/-	60/-	120	Tup above one shear	15	10	5	3	
30/-	60/-	121	Shearling Tup	15	10	5	3	
30/-	60/-	122	Tup Lamb	12	8	4	2	
30/-	60/-	123	Ewe above one shear	12	8	4	2	
30/-	60/-	124	Shearling Ewe or Gimmer	12	8	4	2	
30/-	60/-	125	Ewe Lamb	7	4	2	-	
¹ Dundee Citizens' Perpetual Silver Challenge Cup, value about £75, for the best Border Leicester Sheep. "Extra Stock" eligible to compete.								
² Special Prize of £10 for best Male Animal in the Border Leicester Classes, registered or eligible for registration in the Border Leicester Flock Book. Animals entered as "Extra Stock" not eligible.								
² Special Prize of £10 for best Female Animal in the Border Leicester Classes, registered or eligible for registration in the Border Leicester Flock Book. Animals entered as "Extra Stock" not eligible.								
PRIZE MONEY BY SOCIETY . . .				£157				
CONTRIBUTED PRIZES . . .				20				

¹ This Cup was presented by the Citizens of Dundee to commemorate the holding of the Society's Annual Show at Dundee in 1933. On this occasion the Cup is offered for the best Border Leicester Sheep. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender same to the Society and deliver it at the Society's office when called upon to do so. The winner on each occasion will receive a Medal as a memento of his winning the Cup.

² Given by the Society of Border Leicester Sheep Breeders.

ENTRY FEES			CLASS	PREMIUMS		
Members	Non-Members	First		Second	Third	
		£		£	£	
SHEEP						
HALF-BRED						
Judge : J. Faed Sproat						
<i>President's Champion Medal for best Half-Bred Sheep</i>						
30/-	60/-	126	Ewe above one shear	12	7	3
30/-	60/-	127	Shearling Ewe or Gimmer	12	7	3
30/-	60/-	128	Ewe Lamb	7	4	2
PRIZE MONEY BY SOCIETY .				£57		
OXFORD DOWN						
Judge : Alan Potts						
<i>(All Sheep to be entered or eligible for entry in the Flock-Book)</i>						
<i>President's Champion Medal for best Oxford Down Sheep</i>						
30/-	60/-	129	Shearling Tup	12	8	4
30/-	60/-	130	Shearling Ewe or Gimmer	12	8	4
30/-	60/-	131	Tup Lamb	12	8	4
30/-	60/-	132	Ewe Lamb	7	4	2
PRIZE MONEY BY SOCIETY .				£74		
¹ CONTRIBUTED PRIZES .				11		

ENTRY FEES		CLASS	SHEEP	PREMIUMS		
Members	Non-Members			First	Second	Third
				£	£	£
			SUFFOLK			
			Judge: W. MacDonald			
			(All Sheep to be entered or eligible for entry in the Flock-Book)			
			President's Champion Medal for best Suffolk Sheep			
30/-	60/-	133	Tup above one shear	12	8	4
30/-	60/-	134	Shearling Tup	12	8	4
30/-	60/-	135	Tup Lamb	7	4	2
30/-	60/-	136	Ewe above one shear	12	8	4
30/-	60/-	137	Shearling Ewe or Gimmer	12	8	4
30/-	60/-	138	Ewe Lamb	7	4	2
			¹ Silver Challenge Cup for best Group of Suffolk Sheep, consisting of one Tup, one shear and over, one Shearling Ewe or Gimmer, one Tup Lamb, and one Ewe Lamb—the Females and Tup Lamb must be bred by Exhibitor—drawn from above Classes. The Cup to become the property of an Exhibitor winning it three times, not necessarily in succession.			
			PRIZE MONEY BY SOCIETY	£107		
			² CONTRIBUTED	15		
			PRIZE MONEY BY SOCIETY	£860		
			CONTRIBUTED	66		
			CUPS, MEDALS, &c.	1238		
			Total Prizes for Sheep	£2164		
			[See Notes to EXTRA STOCK, p. 55.]			

¹ Presented by Sir William Prince-Smith, Bt., of Southburn, Driffield.² Given by the Suffolk Sheep Society.

ENTRY FEES		CLASS	PREMIUMS		
Members	Non-Members		First	Second	Third
			£	£	£
GOATS					
<i>(To be judged at 9.30 A.M. on Tuesday, 21st June)</i>					
Judge: Mrs J. R. Blair					
REGULATIONS FOR GOAT CLASSES.					
<p>The Goat Classes are held under the Rules, Regulations, and recognition of the British Goat Society of Diss, Norfolk. All exhibits must be registered either in the Herd Book, Foundation Book, Supplementary Register or Identification Register of the British Goat Society as in the ownership and in the name of the Exhibitor, the registered name and number being quoted on the entry form.</p> <p>The animals will be milked dry at 8 o'clock on the evening previous to the opening of the Show, in the presence of, and to the satisfaction of, the Steward or a representative of the Society duly authorised by him.</p>					
<i>President's Champion Medal for best animal in the Goat Classes</i>					
10/-	20/-	139	Female Goat, over 2 years, in milk, entered in the Toggenburg or British Toggenburg Section or Register of the Herd-Book		
			5	3	1
10/-	20/-	140	Female Goat, over 2 years, in milk, entered in the British Alpine Section or Register of the Herd-Book		
			5	3	1
10/-	20/-	141	Female Goat, over 2 years, in milk, entered in the Saanen or British Saanen Section or Register of the Herd-Book		
			5	3	1
10/-	20/-	142	Female Goat, over 2 years, in milk. Any other variety		
			5	3	1
10/-	20/-	143	Goatling, over 1 but not exceeding 2 years. Any variety		
			5	3	1
10/-	20/-	144	Female Kid, under 1 year. Any variety		
			5	3	1
10/-	20/-	145	Male Goat, over 1 year. Any variety		
			5	3	1
10/-	20/-	146	Milking Competition, for quality, open to Classes 139, 140, 141, and 142		
			5	3	1
10/-	20/-	147	Milking Competition, for quantity, open to Classes 139, 140, 141, and 142		
			5	3	1
¹ Challenge Cup, value £38, for the best Female Goat in the Show.					

The British Goat Society, Roydon Road, Diss, Norfolk, will give Challenge Certificates (qualifying for a Championship) for the best Female Goat that has borne a kid; for the best dual purpose Goat (to be entered in an Inspection Class, and also in the Quality Milking Competition); Breed Challenge Certificates for the best Saanen, best British Saanen, best Toggenburg, best British Toggenburg, and best British Alpine Female Goats, that have borne a bid; and a Bronze Medal for the best exhibit.

¹ Given by the late Lord Dewar, London—to be competed for annually.

ENTRY FEES		CLASS	PREMIUMS		
Members	Non-Members		First	Second	Third
			£	£	£

GOATS

REGULATIONS FOR MILKING COMPETITION
(CLASSES 146 AND 147).

Goats entered for this Competition must be entered in both the Quality and Quantity Classes.

The animals will be milked at 7 P.M. on Wednesday, 22nd June, at an appointed place in the order arranged by the Steward, and the milk of the next twenty-four hours will be taken for the Quality and Quantity Milking Competitions. The hours of milking shall be 7 A.M. and 7 P.M. on Thursday, 23rd June.

The prizes will be awarded according to the following scale of points:—

For each pound of milk 1 point.
For each complete 10 days the Goat has been in milk, with a maximum of 3.6 points $\frac{1}{10}$ of a point.
For each $\frac{1}{4}$ lb. of fat in the milk 5 points.

In cases where the milk contains less than 3 per cent of fat at either or both milkings the Goat will be disqualified and no points shall be allotted to such Goat in the Quality Milking Competition.

In the Quantity Milking Competition points will be awarded for quantity and lactation only.

The period of lactation to be calculated from the date of kidding to the first day of the Show. No prize will be awarded to a Goat giving less than 5½ lbs. of milk per day.

Fractions of lbs. of milk and percentages of fat to be worked out in decimals and added to the total points.

A Certificate giving the last date of kidding, signed by the owner of the Goat exhibited, or his Agent, must in every case be brought to the Steward of Goats as soon as possible after the animal has arrived in the Showyard. Any Goat that has not kidded within two years preceding the date of the Show may not compete.

The milk yielded by Goats in the Showyard shall be the property of the Society.

Note.—No animal is allowed to compete in more than one Class, except that Goats entered in Classes 139, 140, 141, and 142 may also be entered in Classes 146 and 147.

PRIZE MONEY BY SOCIETY	£61
DEPARTMENT OF AGRICULTURE FOR SCOTLAND	20
CUP	38
Total Prizes for Goats	£119

[See Note as to EXTRA STOCK, p. 55.]

ENTRY FEES		CLASS	PREMIUMS		
Members	Non-Members		First	Second	Third
			£	£	£
* PIGS					
(To be judged at 9.30 A.M. on Tuesday, 21st June)					
LARGE WHITE					
Judge : J. F. Wright					
(All Large White Pigs to be entered or eligible for entry in the Herd-Book of the National Pig-Breeders' Association)					
<i>President's Champion Medal for best Large White Pig</i>					
30/-	60/-	148	Boar born before 1st July 1948	10	5 3
30/-	60/-	149	Boar born in 1948 before 1st July	10	5 3
30/-	60/-	150	Boar born in 1948 on or after 1st July	8	4 2
30/-	60/-	151	Boar † born in 1949	8	4 2
30/-	60/-	152	Sow born before 1948	10	5 3
30/-	60/-	153	Sow born in 1948 before 1st July	10	5 3
30/-	60/-	154	Sow born in 1948 on or after 1st July	8	4 2
30/-	60/-	155	Sow † born in 1949	8	4 2
¹ Dundee Citizens' Perpetual Silver Challenge Cup, value about £75, for the best Large White Pig, "Extra Stock" eligible to compete. ² Champion Medal, value £5 (or cash), for best Large White Boar, "Extra Stock" eligible to compete. ² Champion Medal, value £5 (or cash), for best Large White Sow, "Extra Stock" eligible to compete. ² Special Prizes for Groups of Three Large White Pigs bred by Exhibitor. One Boar (at least) must be included in the Group, and not more than one entry to be selected from any one Class. "Extra Stock" eligible to compete.					
PRIZE MONEY BY SOCIETY				5	3 2
² CONTRIBUTED				£113	25

* See Rule 35.

† Pigs born in the year of the Show will be subject to a Dentition Test. See Rule 35.

¹ This Cup was presented by the Citizens of Dundee to commemorate the holding of the Society's Annual Show at Dundee in 1933. The animal winning the Cup must be certified free from hereditary disease. The winner of the Cup shall, before delivery thereof is made to him, give security to the Society that he shall surrender same to the Society and deliver it at the Society's office when called upon to do so. The winner on each occasion will receive a Medal as a memento of his winning the Cup

² Given by the National Pig-Breeders' Association.

ENTRY FEES		CLASS	PREMIUMS		
Members	Non-Members		First	Second	Third
			£	£	£
PIGS					
LARGE BLACK					
Judge: G. A. Goodchild					
<i>President's Champion Medal for best Large Black Pig</i>					
30/-	60/-	156	Boar born before 1948	10	5 3
30/-	60/-	157	Boar born in 1948	10	5 3
30/-	60/-	158	Boar † born in 1949	8	4 2
30/-	60/-	159	Sow born before 1948	10	5 3
30/-	60/-	160	Sow born in 1948	10	5 3
30/-	60/-	161	Sow † born in 1949	8	4 2
¹ Silver Medal for the best Large Black Boar. ¹ Silver Medal for the best Large Black Sow.					
PRIZE MONEY BY SOCIETY . . . £95					
¹ CONTRIBUTED PRIZES . . . 5					
WESSEX SADDLEBACK					
Judge: W. R. Jackson					
<i>President's Champion Medal for best Wessex Saddleback Pig</i>					
30/-	60/-	162	Boar, any age.	10	5 3
30/-	60/-	163	Sow born before 1st July 1948	10	5 3
30/-	60/-	164	Sow born in 1948 on or after 1st July	8	4 2
30/-	60/-	165	Sow † born in 1949	8	4 2
² Championship Prize, value £5 (or cash), for the best animal in the Wessex Saddleback Pig Classes.					
PRIZE MONEY BY SOCIETY . . . £54					
² CONTRIBUTED . . . 10					
[In the event of there being less than six Exhibitors and an average of three per Class, the Classes for Wessex Saddleback Pigs will be cancelled.]					
PRIZE MONEY BY SOCIETY . . . £262					
CONTRIBUTED . . . 40					
CUPS, MEDALS, &c. . . 80					
Total Prizes for Pigs . . . £382					

* See Rule 35. † Pigs born in the year of the Show will be subject to a Dentition Test.
¹ Given by the Large Black Pig Society. ² Given by the National Pig-Breeders' Association.

EXTRA STOCK

(FORMER WINNERS NOT ELIGIBLE FOR ORDINARY CLASSES)

Former winners not eligible for Ordinary Classes may be exhibited as Extra Stock, and may receive Awards as follows:—

	£	£	£
Cattle	10	5	3
Horses—Clydesdales and Hunters	10	5	3
Highland and Western Island Ponies, Shetland Ponies, and Hackneys in Harness	5	3	2
Riding Ponies and Hill Ponies in Saddle	3	2	1
Sheep—Blackface, Cheviot, North Country Cheviot, and Border Leicester	5	3	2
Other breeds	3	2	1
Goats and Pigs	3	2	1

Animals entered as Extra Stock are eligible to compete for the President's Medals, whether former winners of these Medals or not. They are also eligible to compete for Special Prizes where the conditions of these Prizes permit.

While every endeavour will be made to see that former winners are correctly entered in the Catalogue as "Extra Stock," the Society accepts no responsibility for this, it being the duty of Exhibitors to state clearly on the Entry Form the Show at which the animal became disqualified for the Ordinary Classes. If an animal appears in the Catalogue as entered in an Ordinary Class which should appear as "Extra Stock," it cannot thereafter be transferred to the "Extra Stock" Section.

Entry Fees—same as corresponding Classes.

* POULTRY

(To be judged at 9.30 A.M. on Tuesday, 21st June)

Entries close 27th April

Judges: James Garrow, Classes 1-18, 37-38, 65-87, 92-102.

E. Whitaker, Classes 19-36, 39-64, 88-91.

1 Champion Challenge Silver Salver, value £45, for the best exhibit in the Poultry Classes.

First Premium—TWENTY SHILLINGS; *Second Premium*—TEN SHILLINGS. In each Class in which there are four or more entries a Third Prize of Five Shillings may be awarded, provided there is sufficient merit in the pens. In addition to the Premiums, the Judges may award *one* Very Highly Commended, *one* Highly Commended, and as many Commended tickets in each Class as they consider justified by the number and merit of the entries.

Champion Silver Medals are offered as follows:—

- | | |
|--------------------------------|---------------------------------------|
| 1. Best Cock, any Variety. | 5. Best Bantam, any Variety. |
| 2. Best Hen, any Variety. | 6. Best Waterfowl. |
| 3. Best Cockerel, any Variety. | 7. Best Turkey. |
| 4. Best Pullet, any Variety. | 8. Best Utility Bird (Classes 50-59). |

Aged Birds must have been hatched previous to, and Cockerels and Pullets on or after, 1st November of the year preceding the Show.

Entry Fees—Members, 2s. 6d.; Non-Members, 3s. 6d.

LEGHORN—	Class		Class
White	1. Cock	ORPINGTON	18. Cock
	2. Hen		19. Hen
	3. Cockerel		20. { Cockerel
	4. Pullet		or Pullet
Any other Colour	5. Cock	WYANDOTTE—	
	6. Hen	White	21. Cock
	7. Cockerel		22. Hen
	8. Pullet		23. Cockerel
			24. Pullet
MINORCA	9. Cock	Any other Colour	25. { Cock or
	10. Hen		Cockerel
	11. Cockerel		26. { Hen or
	12. Pullet		Pullet
SCOTCH GREY	13. { Cock or	RHODE ISLAND RED	27. Cock
	Cockerel		28. Hen
	14. { Hen or		29. Cockerel
	Pullet		30. Pullet
PLYMOUTH ROCK	15. Cock	SUSSEX	31. Cock
	16. Hen		32. Hen
	17. { Cockerel		33. { Cockerel
	or Pullet		or Pullet

Special Entry Forms for Poultry Classes.

* See Regulations 65 and 66.

¹ Given by the late Lord Dewar. Messrs W. Binnie & Son, Garth House, Denny, who won the Salver outright in 1938, have kindly re-presented the Salver to the Society as a Perpetual Challenge Trophy. A Silver Medal will be given by the Society to the winner each year as a memento of his winning the Trophy.

		Class	DUCKS—	
DORKING—		34. Cock	Aylesbury	65. Drake
		35. Hen		66. Duck
		36. { Cockerel or Pullet		67. { Drake or Duck (young)
SCOTS DUMFRIES		37. { Cock or Cockerel	Orpington	68. Drake
		38. { Hen or Pullet		69. Duck
BARNEVELDER		39. Cock		70. { Drake or Duck (young)
		40. Hen		71. Drake
		41. { Cockerel or Pullet	Indian Runner	72. Duck
INDIAN GAME		42. { Cock or Cockerel		73. { Drake or Duck (young)
		43. { Hen or Pullet	Any other Variety	74. Drake
OLD ENGLISH GAME		44. Cock		75. Duck
		45. Hen		76. { Drake or Duck (young)
		46. Cockerel		
		47. Pullet		
ANY OTHER VARIETY NOT CLASSIFIED	NOT	48. { Cock or Cockerel	GEESSE	77. Gander
		49. { Hen or Pullet		78. Goose
UTILITY—			TURKEYS	79. { Cock or Cockerel
Leghorn—any Variety	50.	{ Cock or Cockerel		80. { Hen or Pullet
Wyandotte—any Colour	51.	{ Cock or Cockerel	BANTAMS—	
Rhode Island Red	52.	{ Cock or Cockerel	Game—Old English Spangle	81. Cock
Any other Variety	53.	{ Cock or Cockerel	Game—Old English, any other colour	82. Hen
Leghorn—White	54.	{ Hen or Pullet		83. Cock
Leghorn—any other Colour	55.	{ Hen or Pullet	Game—Modern (any colour)	84. Hen
Wyandotte—any Colour	56.	{ Hen or Pullet		85. Cock
Rhode Island Red	57.	{ Hen or Pullet		86. Hen
Any other Variety (Heavy Breed)	58.	{ Hen or Pullet	Game—Old English or Modern	87. { Cockerel or Pullet
Any other Variety (Light Breed)	59.	{ Hen or Pullet	Rhode Island Red	88. Cock
ANY CROSS FOR LAYING	60.	Hen		89. Hen
ANY CROSS FOR LAYING	61.	Pullet	Wyandotte—any colour	90. Cock
TABLE POULTRY—				91. Hen
Any pure Breed	62.	{ Cock or Cockerel	Scots Grey	92. Cock
Any Cross	63.	{ Cock or Cockerel		93. Hen
Any Pure Breed or Cross	64.	{ Pair of Pullets	Rock—any colour	94. Cock
				95. Hen
			Selbright	96. Cock
				97. Hen
			Minorca or Rosecomb	98. Cock
				99. Hen
			Any other Variety—not classified	100. Cock
				101. Hen
			Soft Feathered or Indian Game	102. { Cockerel or Pullet

AMOUNT OF POULTRY PREMIUMS, £178, 10s.

Special Entry Forms for Poultry Classes.

DAIRY PRODUCE

(To be judged at 9.30 A.M. on Tuesday, 21st June)

Judge : James Kirkwood, N.D.A., N.D.D.

No Exhibitor to show more than one lot in any Class

Entry Fees—Members, 7s. 6d. ; Non-Members, 10s.

Class.	Premiums.				
	1st.	2nd.	3rd.	4th.	5th.
	£	£	£	£	£
1. Powdered Butter, not less than 2 lb.	4	3	2	1	-
2. Fresh Butter, two 1-lb. lots, to be made up in form of bricks without any prints	4	3	2	1	-
3. Cheddar Cheese, 56 lb. and upwards	9	5	3	2	1
4. Cheese, 14 lb. and under	5	3	2	1	-
Total	<hr/> £51 <hr/>				

Special Entry Forms for Dairy Produce.

See Regulations 74 and 75.

Railway delivery charges from station to Showyard and back to be paid by exhibitor. See pp. 18-21.

RABBITS

(To be judged at 10 A.M. on Wednesday, 22nd June)

Exhibited WEDNESDAY, THURSDAY, AND FRIDAY

Judges : To be appointed

First Premium, 15s. Second Premium, 10s. Third Premium, 5s.

Entry Fee—2s. 6d. each entry per Class

REGULATIONS

Rabbits must be brought to the Showyard between 5 P.M. and 9 P.M. on *Tuesday, 21st June 1949*. No lot will be admitted without an Admission Order. Pens, food, and attendance will be found by the Society.

Rabbits may be penned on Tuesday evening and removed at the close of the Show by Exhibitors themselves or their representatives. In the event of neither the Exhibitor nor an authorised representative of the Exhibitor being present to pen or remove Rabbits, they will be penned and removed by men hired and paid by the Society, but this will be done on the understanding that the men are hired to do the work on behalf of Exhibitors, and solely at their risk, and that the Society will be in no way responsible for expenses incurred or loss of or injury to Exhibits by errors or accidents in penning, despatching, or conveying Exhibits.

On *Wednesday, 23rd June*, the Rabbit Shed will be closed to the public during the Judging. On the last day of the Show the Rabbit Shed will be closed to the public at 4 P.M.; at 5 P.M. Exhibitors or their representatives will be admitted to the Shed to remove Exhibits, provided the Exhibitor has, *not later than 11 A.M. on the last day of the Show*, given written notice to the Secretary to the effect that the Exhibitor or the Exhibitor's representative will attend at the Rabbit Shed at 5 P.M. to remove the Rabbits.

FANCY VARIETIES.

- | | |
|--|--|
| <ul style="list-style-type: none"> 1. Dutch, any colour, adult. 2. Dutch, any colour, under 5 months. 3. English, any colour, adult. 4. English, any colour, under 5 months. 5. Polish and Himalayan, any age. 6. Any other variety, fancy, adult. | <ul style="list-style-type: none"> 7. Any other variety, fancy, under 5 months. 8. *Pairs, fancy, any age (one colour). 9. *Breeders, fancy, adult. 10. *Breeders, fancy, under 5 months. 11. *Challenge, fancy, adult. 12. *Challenge, fancy, under 5 months. |
|--|--|

NORMAL FUR VARIETIES.

- | | |
|---|---|
| <ul style="list-style-type: none"> 13. Beveren, any colour, adult. 14. Beveren, any colour, under 5 months. 15. Chinchilla, adult. 16. Chinchilla, under 5 months. 17. Fox, any colour, adult. 18. Fox, any colour, under 5 months. 19. Sable, marten, adult. 20. Sable, Siamese, adult. 21. Sable, any variety, under 5 months. | <ul style="list-style-type: none"> 22. Any other variety, normal fur, adult. 23. Any other variety, normal fur, under 5 months. 24. *Pairs, normal fur, any age. 25. *Breeders, normal fur, adult. 26. *Breeders, normal fur, under 5 months. 27. *Challenge, normal fur, adult. 28. *Challenge, normal fur, under 5 months. |
|---|---|

REX VARIETIES.

- | | |
|--|---|
| <ul style="list-style-type: none"> 29. Ermine, adult. 30. Ermine, under 5 months. 31. Havana, adult. 32. Havana, under 5 months. 33. Seal or Sable, adult. 34. Seal or Sable, under 5 months. 35. Blue or Lilac, adult. 36. Blue or Lilac, under 5 months. | <ul style="list-style-type: none"> 37. Any other variety, Rex, adult. 38. Any other variety, Rex, under 5 months. 39. *Pairs, Rex, any age. 40. *Breeders, Rex, adult. 41. *Breeders, Rex, under 5 months. 42. *Challenge, Rex, adult. 43. *Challenge, Rex, under 5 months. 44. *Grand Challenge. |
|--|---|

Classes marked * must be duplicated.

Prize money by the Society—£86.

HONEY, &c.

(To be judged at 10 A.M. on Tuesday, 21st June)

Judge: W. B. Cameron

OPEN CLASSES

Class.	Entry Fees—2s. 6d. each.	Premiums.		
		1st.	2nd.	3rd.
1. Collection of Appliances suitable for a beginner's outfit for Bee-keeping. A card naming all the articles, along with the price at which they will be supplied for one year from date, to be fixed to the exhibit		20/-	15/-	10/-
2. Best and most complete Frame Hive for general use, with any improvements. Unpainted		20/-	15/-	10/-
3. Best and most serviceable Hive. Empty and unpainted. Price not to exceed 80/-		20/-	15/-	10/-
4. Four Sections of Comb Honey, excluding Heather Honey		20/-	15/-	10/-
5. Four Sections of Heather Honey		20/-	15/-	10/-
6. Four Jars of Run or Extracted Light-coloured Honey, approximate weight 4 lb.		20/-	15/-	10/-
7. Four Jars of Run or Extracted Medium or Dark-coloured Honey, excluding Heather Honey, approximate weight 4 lb.		20/-	15/-	10/-
8. Four Jars of pressed Heather Honey in liquid form, approximate weight 4 lb.		20/-	15/-	10/-
9. Four Jars of Granulated Honey, approximate weight 4 lb.		20/-	15/-	10/-
10. One shallow Frame of Comb Honey for extracting purposes		20/-	15/-	10/-
11. Best display of Honey in any form suitable for a shop window in space 4 feet by 4 feet. Weight of honey not to exceed 30 lb.		60/-	30/-	20/-
12. Best exhibit of not less than 1 lb. of Wax in any form		20/-	15/-	10/-
13. Best exhibit of not less than 1 lb. of Wax made into shapes for retail trade and over-counter trade. Convenience in packing to be taken into consideration		20/-	15/-	10/-
14. Observatory Hive with Queen and Bees—two or more frames		50/-	30/-	20/-
15. Observatory Hive with Queen and Bees—one frame, no super		40/-	30/-	15/-

(Confined to Scottish Exhibitors.)

16. One Standard Frame of Comb Honey for extracting purposes	20/-	15/-	10/-
17. Four Sections of Comb Honey, excluding Heather Honey	20/-	15/-	10/-
18. Four Sections of Heather Honey	30/-	20/-	10/-
19. Four Jars of Run or Extracted Medium or Dark-coloured Honey, excluding Heather Honey, approximate weight 4 lb.	30/-	20/-	10/-
20. Four Jars of pressed Heather Honey in liquid form, approximate weight 4 lb.	20/-	15/-	10/-
21. Four Jars of Run or Extracted Light-coloured Honey, approximate weight 4 lb.	30/-	20/-	10/-

Brass Challenge Skop, to be held for one year, presented by Mrs J. E. Robertson, Edinburgh, to be awarded to the Exhibitor gaining First Prize in Class 18.

Empire Exhibition Perpetual Challenge Cup.

Presented by the Scottish Beekeepers' Association.

1. To be competed for annually at the Highland and Agricultural Society's Show, and awarded to the competitor gaining most points in the Classes for Honey and Wax only, calculated on the following basis: 1st prize, 3 points; 2nd prize, 2 points; 3rd prize, 1 point. In the event of a tie, the competitor having most first prizes to be adjudged the winner. The winner shall hold the Cup for one year.

2. Any competitor having official connection with an Agricultural College shall not be eligible to compete for the Cup.

Silver and Bronze Medals will be awarded by the Scottish Bee-Keepers' Association to the First and Second winners of the greatest number of points in the Classes for Honey and Wax only, calculated on the following basis: 1st prize, 3 points; 2nd prize, 2 points; 3rd prize, 1 point.

PRIZE MONEY BY SOCIETY	£47, 0s. 0d.
CONTRIBUTED BY SCOTTISH BEEKEEPERS' ASSOCIATION	£10, 10s. 0d.
EMPIRE EXHIBITION PERPETUAL CHALLENGE CUP	£25, 0s. 0d.

Special Entry Forms for Appliances and Honey.

RULES AND REGULATIONS.

1. All exhibits must be despatched in time to be delivered at the Showyard not later than 6 p.m. on Monday, the day before the opening of the Show. Under the railway regulations, exhibitors will require to pay return carriage and cartage when despatching. Return carriage-paid labels will be supplied by the Secretary, and must be addressed for the return journey, and have numbers of Classes on same. Non-compliance with this regulation will mean that the exhibit will be left in the Showyard. **Boxes containing hives, jars, or sections must be screwed and not nailed, and the hives, bottles, and sections so placed that they can be lifted out and replaced without disturbing the packing.**

2. The number of the exhibit will be sent by the Secretary (as entered on the printed slip) and must be placed on every exhibit—viz., **Jars:** on side of jar about half an inch from the foot. **Sections and Frames:** at right top corner of the glass. **Wax:** at right top corner of the glass. Also on **1 lb. Cakes:** on the underside. No goods will be staged unless this rule is complied with. All competitors must leave the Bee Shed by 9 a.m. on Tuesday morning.

3. No card, trade mark, or name of the exhibitor may be placed upon any part of an exhibit. Every article exhibited must be the property of the exhibitor, and all honey must have been gathered in the natural way within Great Britain and Northern Ireland by bees the property of the exhibitor.

4. Comb Honey Sections, $4\frac{1}{2}$ inches by $4\frac{1}{2}$ inches, to be staged in cardboard boxes glazed on both sides, showing not less than $3\frac{1}{2}$ inches by $3\frac{1}{2}$ inches of comb surface clear of points of lacing, but allowing easy access to the Judge. Sections with fixed glass will be disqualified.

Shallow Frames,—no paper edging is permissible and each frame must be exhibited in a separate glazed case.

5. All Run, Extracted, and Granulated Honey must be shown in the usual mercantile Glass Jars holding approximately 1 lb., except in Class 11.

6. No exhibitor shall be allowed to take more than one prize in any one class.

7. The Judge shall be empowered to withhold prizes in case of insufficient merit.

8. Should there be in any class three or less than three entries, the value of the first prize may be reduced at the discretion of the Judge to that of the second, the second to that of the third, and no third prize will be awarded.

9. The Judge will commence his inspection at 10 a.m. on Tuesday, and the Bee Shed will be closed to the public during the judging.

10. Exhibits of Honey may be placed in their positions in the shed before the opening and removed at the close of the Show by exhibitors themselves or their representatives. In the event of neither the exhibitor nor a person with written authority from the exhibitor being present to place or remove the exhibits, they will be placed and removed by men hired and paid by the Society, but this will be done on the understanding that the men are hired to do the work on behalf of the exhibitors, and solely at their risk, and that the Society will be in no way responsible for expenses incurred or loss of or injury to exhibits by errors or accidents in placing, despatching, or conveying exhibits. In the case of exhibits which are not removed by 5.30 p.m. on the closing day of the Show, the Society will hold itself at liberty to hand them over to the railway companies for despatch to the respective exhibitors.

11. No lot can be removed from the yard till 4 p.m. on Friday, the last day of the Show.

12. The Society undertakes no responsibility for the receipt or despatch of exhibits, nor for any injury exhibits may sustain during the Show or otherwise.

13. **Railway delivery charges from station to Showyard and back to be paid by exhibitor. See pp. 18-21.**

RURAL INDUSTRIES

(To be judged at 2.30 P.M. on Monday, 20th June)

Judges: (To be appointed).

Entry Fee, 2s. 6d. each article.

Each article must form a separate exhibit.

OPEN CLASSES.

SHETLAND KNITTING.

Class.	<i>Exhibits to be made from Shetland Wool.</i>	Premiums.		
		1st.	2nd.	3rd.
1.	Fine Lace Shawl, Scarf, or Jumper	£3	£2	£1
2.	All-over Fair Isle Jumper or Cardigan	3	2	1
3.	Jumper or Cardigan—plain, lace, or Fair Isle border	3	2	1
4.	Hap Shawl, or Fair Isle set of Beret, Scarf, and Gloves	2	1	10/-

TWEEDS.

	Heavy-weight Tweed—Hand-woven	3	2	1
6.	Light-weight Tweed—Hand-woven	3	2	1
7.	Tartan—Hand-woven	3	2	1
8.	Carriage Rug or Plaid—Hand-woven	3	2	1

MISCELLANEOUS.

9.	Floor Rug, new material hook-through, woven or sewn	3	2	1
10.	Specimen of White Embroidery—to be exhibited unwashed	3	2	1
11.	Specimen of Coloured Embroidery—silk or cotton (canvas work not eligible)	3	2	1
12.	Specimen of Coloured Embroidery—woolwork (canvas work not eligible)	3	2	1
13.	Specimen of Old English Quilting	3	2	1
14.	Pair of Leather Gloves	2	1	10/-
15.	Specimen of Leather Work other than Gloves	2	1	10/-
16.	" Hand-painted Pottery	2	1	10/-
17.	" Hand-thrown Pottery	2	1	10/-
18.	" Woodcraft (small article)	2	1	10/-
19.	Home-spun Yarn, lace-weight—2-3 cuts	2	1	10/-
20.	Home-spun Yarn, heavy-weight—2-3 cuts	2	1	10/-
21.	Tea Cloth, with Crochet edging	2	1	10/-
22.	Specimen of Hand-made Lace other than Crochet	3	2	1
23.	Men's Golf or Kilt Hose	2	1	10/-
24.	Shepherd's Crook, with horn handle—Hand-made	2	1	10/-
25.	Shepherd's Crook in one piece—Hand-made	2	1	10/-
26.	Walking Stick—Hand-made	2	1	10/-
27.	Stuffed Toy—Jointed	2	1	10/-
28.	Wooden Toy	2	1	10/-

RURAL INDUSTRIES—continued.**CONFINED CLASSES.****Open to Women's Rural Institutes and Members thereof in the whole of Scotland.**

	Premiums.		
	1st.	2nd.	3rd.
29. Specimen of Tapestry (Canvas Work) in Florentine, Grospoint, or Petit Point Stitches	£8	£2	£1
30. Specimen of Corded Quilting (any article)	2	1	10/-
31. Specimen of Smocking (any article)	3	2	1
32. Hand-sewn Underwear, 2 articles	2	1	10/-
33. Specimen of Patchwork	2	1	10/-
34. Shopping Bag—Felt appliqué	2	1	10/-
35. Hand-knitted Woollen Jumper or Cardigan, not Shetland or Fair Isle pattern	2	1	10/-
36. Boys' Stockings, 4-ply fingering	2	1	10/-
37. Hand-woven Article, made on a Table Loom or one weaving narrow width	2	1	10/-
			£36 10/-
PRIZE MONEY BY SOCIETY	£164 10/-		

NOTE.—(a) No Exhibitor may enter more than one article in any one Class.

(b) No exhibit may be entered in more than one Class.

(c) All exhibits must have been completed within the twelve months preceding the Show.

(d) No exhibit mounted under glass will be accepted at the Show.

REGULATIONS.

1. The Competition, except where otherwise stated, is open to competitors from all parts of Great Britain, Northern Ireland, and Eire (Irish Free State). Societies or Institutes, as well as individuals, shall be allowed to compete.

2. Every exhibit must be the work either of the exhibitor or of a member of the exhibiting Society or Institute, and must have been completed within the twelve months preceding the Show.

3. An entry fee of 2s. 6d. for each exhibit is payable at the time of entry.

4. Exhibits will be received in the Showyard not later than 8 P.M. on Saturday, 18th June. Judging will commence at 2 30 P.M. on Monday, 20th June, the day before the opening of the Show. The section will be closed to the public during the judging. Exhibits shall not be removed till after the close of the Show.

5. In no case shall a prize be awarded unless the Judge deems the exhibit to have sufficient merit; and where only one or two articles are entered in a class, and the Judge considers them unworthy of the prizes offered, it shall be in his or her power to award a lower prize.

6. Exhibits shall be entirely at the risk of exhibitors, who shall be solely responsible for delivery and removal of their own exhibits. In the event of neither the exhibitor nor a person with written authority from the exhibitor being present to remove exhibits, these will be removed by persons hired and paid by the Society. The placing and despatching of exhibits will be done on the understanding that the persons are hired to do the work on behalf of the exhibitors and solely at their risk, and that the Society will be in no way responsible for expenses incurred or loss of or injury to exhibits by errors or accidents in placing, despatching, or conveying exhibits. A receipt signed by the exhibitor, on a form to be issued by the Secretary, must be delivered before any exhibit is handed over to the exhibitor or his or her representative.

On the last day of the Show the Shed will be closed to the public at 4.30 P.M., but no exhibit may be removed until 5 P.M.

7. Exhibitors shall be allowed to attach to their exhibits a notice indicating where (in the Showyard or elsewhere) similar articles may be purchased.

8. Exhibits must not be sent to the Society's Office previous to date of Show. Labels, &c., will be posted to exhibitors about fourteen days prior to the Show.

9. All exhibits to be sent to the Showyard in packing, sufficiently strong, to be used for return.

10. Railway delivery charges from station to Showyard and back to be paid by exhibitor. See pp. 18-21.

HORSE-SHOEING AND SHOE-MAKING

Open to Shoeing-Smiths from any part of Great Britain and Northern Ireland.

Horses provided for this Competition cannot be entered in any other Class.

Special Entry Forms for Horse-Shoeing and Shoe-Making Competitions.

HORSE-SHOEING COMPETITION

Judges : John J. Murdoch, M.R.C.V.S., George G. Crichton, William Stephen.

THURSDAY AND FRIDAY, 23RD AND 24TH JUNE.

FARM HORSES.

1st Prize, £7 and Gold Medal.*	5th Prize, £4.
2nd Prize, £6 and Canteen of Cutlery	6th Prize, £3.
(£6, 10s.)†	7th Prize, £3.
3rd Prize, £6.	8th Prize, £2.
4th Prize, £5.	9th Prize, £2.

* Gold Medal (value £20) given by Worshipful Company of Farriers, London.

† Canteen of Cutlery given by Messrs Neilson & Cleland, Ltd., Coatbridge.

PRIZE MONEY BY SOCIETY	£28 0 0
GOLD MEDAL BY WORSHIPFUL COMPANY OF FARRIERS, LONDON	20 0 0
BAIRD & SCOTTISH STEEL, LTD., GLASGOW	10 0 0
CANTEEN OF CUTLERY BY NEILSON & CLELAND, LTD.	6 10 0
TOTAL	£64 10 0

REGULATIONS.

1. Entries must be made with the Secretary not later than 27th April. Entry Fee, 2s. 6d. Entry Forms may be had on application.

2. The Competition will take place in the Showyard, and will be decided by points, time being taken into consideration. Each Competitor must make and fix one fore and one hind shoe, having previously taken off the old shoes. The shoes must be fullered, with low calkins, and with toe-pieces on hind shoes only. The use of files and wire brushes is not permitted. Each Competitor must bring his own tools, nails, and a striker. The striker will not be allowed to touch the horse's hoof. The local Blacksmiths' and Farriers' Association will

provide blowers, forges and anvils. The horses to be shod will also be provided by the Association. Forges and horses will be balloted for.

3. Competitors must attend at the Horse-Shoeing Stance **half an hour before they are due to compete.**

4. The Competitor and his striker will be admitted to the Yard free of charge on the day of Competition on presentation of tickets which will be sent to the Competitor for the purpose.

Dundyvan best horse-shoe iron will be used in this Competition and will be supplied by Messrs William Martin, Sons & Co., Coatbridge.

SHOE-MAKING COMPETITION

Judges : George G. Crichton, William Stephen.

WEDNESDAY, 22ND JUNE.

1st Prize, £7 and Gold Medal (£10).*	3rd Prize, £5.
2nd Prize, £6 and Canteen of Cutlery (£6, 10s.).†	4th Prize, £4.
	5th Prize, £3.

* Given by Capewell Horse Nail Co., Bristol.

† Given by Messrs Neilson & Cleland, Ltd., Coatbridge.

PRIZE MONEY BY SOCIETY	£15 0 0
GOLD MEDAL BY CAPEWELL HORSE NAIL CO., BRISTOL. .	10 0 0
MESSRS WILLIAM MARTIN, SONS & CO., COATBRIDGE .	10 0 0
CANTEEN OF CUTLERY BY MESSRS NEILSON & CLELAND, LTD., COATBRIDGE,	6 10 0
	<hr/>
	<u>£41 10 0</u>

REGULATIONS.

1. Entries must be made with the Secretary not later than 27th April. Entry Fee, 2s. 6d. Entry Forms may be had on application.
2. Each Competitor must make one fore shoe and one hind shoe.
3. Each shoe must be made from $18\frac{1}{2}" \times 1\frac{1}{4}" \times \frac{1}{2}"$ iron, which will be provided at the Stance.
4. The fore shoe to be fullered and clipped, and the hind shoe fullered, clipped, and toed.
5. The use of files and wire brushes is prohibited.
6. Time allowed will be limited to 40 minutes.
7. Competitors must bring their own tools and a striker, and must attend at Horse-Shoeing Stance 15 minutes before they are due to commence.
8. The Competitor and his striker will be admitted to the Yard free of charge on the day of Competition on presentation of tickets which will be sent to the Competitor for the purpose.

Waverley horse-shoe iron will be used in this Competition and will be supplied by Messrs Bairds & Scottish Steel Ltd., Glasgow.

LIVE STOCK JUDGING COMPETITION

(Arranged in co-operation with the Scottish Association of Young Farmers' Clubs and confined to Young Farmers Club Members.)

Special Entry Forms for Live Stock Judging Competition.

1. The Society will hold a Live Stock Judging Competition on Thursday, 24th June, commencing at 10 A.M.

2. Competitors must have passed their 14th birthday but not have reached their 26th birthday on 23rd June 1949.

3. County Associations of Young Farmers' Clubs in Scotland shall be allowed to enter teams in proportion to their membership and in accordance with the scale adopted by the Highland and Agricultural Society and the Scottish Association of Young Farmers' Clubs. Three members shall form a team. Members of the prize-winning teams at Inverness Show are ineligible to compete in this Competition.

4. Entries must be lodged with the Secretary of the Scottish Association of Young Farmers' Clubs not later than 10 A.M. on 2nd May 1949, and on no account can late entries be accepted. An entry fee of 7s. 6d. shall be paid by each team.

5. The Stock to be judged shall consist of—

(a) Cattle (four classes)	.	.	.	{ Shorthorn.
				{ Aberdeen-Angus.
				{ Ayrshire.
				{ British Friesian.
(b) Horses (one class)	.	.	.	{ Clydesdale.
				{ Blackface.
(c) Sheep (three classes)	.	.	.	{ Cheviot (South Country).
				{ Border Leicester.

There will be four animals in each class. The animals to be judged shall be chosen by the Society's Stewards. The usual method of parading Stock in Young Farmers' Clubs' Stock Judging Contests will be adopted. The Society reserves the right to modify the nature of the classes should difficulty arise in finding suitable material amongst the animals exhibited at the Show.

6. In Judging, breed type shall be taken into account. All Stock shall be considered free from acquired blemishes or unsoundness. The competitors shall judge in groups, and fifteen minutes shall be allowed for the judging of each class.

Each member of the ten teams gaining the highest number of points for placing the animals shall give oral reasons to the Judges for his or her placing of the class of Border Leicester Sheep. Reasons should give comparisons between the animals and competitors shall be given a post-card on which to make notes.

7. Competitors are forbidden to discuss the Stock with each other, or with any other person, until the conclusion of the whole Competition.

8. Marking:—

60 points for correct placing of animals in each class: total 480.

60 points for oral reasons for placings in one class: total 60.

For incorrect placing, marks shall be deducted by the Judges in accordance with the scale recommended by the Scottish Association of Young Farmers' Clubs. The decision of the Directors in all matters relating to the Competition shall be final.

9. Prizes shall be awarded as follows :—

Team Competition—

1st	£6 and 3 Medium Silver Medals
2nd	£4 and 3 Medium Bronze Medals.
3rd	£3
4th	£2

- ¹ 'Glasgow Herald' Challenge Cup, value £75, to be awarded to the team winning the First Prize in the Competition.

TOTAL PRIZE MONEY BY SOCIETY, £15.

¹ Given by Messrs George Outram & Co., Ltd., Glasgow.

ABSTRACT OF PREMIUMS.

GIVEN BY THE SOCIETY.

Cattle	£1,751	2	0
Horses	1,129	10	0
Jumping Competitions	295	0	0
Sheep	860	0	0
Goats	61	0	0
Pigs	262	0	0
Poultry	178	10	0
Dairy Produce	51	0	0
Rabbits	66	0	0
Honey, &c.	47	0	0
Rural Industries	164	10	0
Horse-Shoeing and Shoe-Making	43	0	0
Live Stock Judging Competition	15	0	0
Medals to Breeders, &c.	100	0	0
	£5,023	12	0

CONTRIBUTED PRIZES, CUPS, &c.

President's Champion Medals
---------------------------------------	----

CATTLE.

*Renfrewshire Perpetual Gold Challenge Cup	£500	0	0
*The late Mr William Duthie—Silver Cup	220	0	0
*Messrs Adolfo Bullrich & Co.—The Eduardo Bullrich Silver Challenge Cup	150	0	0
*Mr W. M'Nair Snadden, M.P.—Silver Cup	75	0	0
*J. Baird & Co. (Falkirk) Ltd.—Emilio R. Casares, jun. —Memorial Cup	80	0	0
The late Mr J. Duthie Webster—The Duthie Prize	30	0	0
Tweeddale Gold Medal	30	0	0
The Shorthorn Society (and 2 Medals)	40	0	0
*Fife and Kinross Perpetual Gold Challenge Cup	500	0	0
*Mr J. E. Kerr—Silver Cup	75	0	0
*The late Mr Eduardo Estanguet, Argentina—Silver Cup	80	0	0
*The late Sir George Macpherson Grant, Bt.—Silver Cup	110	0	0
*Mr J. E. Kerr—Harviestoun Challenge Cup	75	0	0
*The late Mr Falconer L. Wallace—Silver Cup	75	0	0
Aberdeen-Angus Cattle Society—Champion Medal . . . . .	..	..	..
*Corporation of Edinburgh Perpetual Gold Challenge Cup	225	0	0
*Galloway Cattle Society—Dr Gillespie Memorial Trophy	120	0	0
*Galloway Cattle Society—Silver Cup	75	0	0
*The late Mrs Brown, Kirkbrec, Glasgow—Knockbrec Challenge Cup	75	0	0
*The late General Sir Ian Hamilton, G.C.B.—Silver Cup	75	0	0
*Highland Cattle Society of Scotland—Silver Cups	190	0	0
Hereford Herd-Book Society	39	10	0
*Boots Pure Drug Co. Ltd.—Challenge Trophy	75	0	0
*Cowhill Champion Cup	45	0	0
Ayrshire Cattle Herd-Book Society	20	0	0
*Lady MacRobert, J.P., B.Sc., F.G.S.—Silver Bell	157	10	0
*Mrs J. P. Brown, Dipple—Silver Cup	75	0	0
*British Friesian Cattle Society—Silver Cup	80	0	0
*Scottish Friesian Breeders' Club—The George Hobson Silver Challenge Cup	50	0	0
British Friesian Cattle Society (and 2 Medals)	46	8	0
*The Baroness Burton—Silver Cup	30	0	0
*Lady Lovat—Silver Cup	25	0	0
*Mr Charles Corsar, Rosely—Silver Cup . . . . .	..	..	..
English Jersey Cattle Society	25	0	0
	3,468	8	0
Carry forward	£8,492	0	

* Challenge Prizes.

ABSTRACT OF PREMIUMS—*continued*

Brought forward £3,492 10 0

HORSES.

*Clydesdale Horse Society—Cawdor Challenge Cup	. . . . .	£10 0 0	
“ William Taylor ” Memorial Committee			
*The James Kilpatrick Perpetual Challenge Cup			
*Mr James Clark—Silver Challenge Cup		80 0 0	
*Angus Agricultural Society—Silver Cup		80 0 0	
Suffolk Horse Society		33 0 0	
Percheron Horse Society		38 10 0	
*Dumfriesshire Hunt—Dumfries Centenary Silver Challenge Cup		150 0 0	
*Major W. C. H. Bailie—The Manderston Silver Challenge Cup		250 0 0	
Hunters' Improvement and National Light Horse Breeding Society			
—Silver Medal			
Miss G. M. J. Stewart		5 0 0	
*Colonel Sir Henry R. and Lady Ramsay Fairfax-Lucy—Silver			
Challenge Cup		38 0 0	
*Mrs Moncrieff Wright—Kinmonth Perpetual Gold Challenge			
Quaich		150 0 0	
Department of Agriculture for Scotland		50 0 0	
Highland Pony Society		60 0 0	
*A few Members of the Shetland Pony Stud-Book Society—			
Perpetual Silver Challenge Cup		75 0 0	
Shetland Pony Stud-Book Society		5 0 0	
			1,024 10 0

SHEEP.

*Paisley Perpetual Gold Challenge Cup	£900 0 0	
Mr Robert C. Paterson—The Charles Cadzow Memorial Cup	150 0 0	
“ James Archibald ” Prize	20 0 0	
*Cheviot Sheep Society—Borthwick Perpetual Challenge Cup	38 0 0	
*The Duke of Sutherland, K.T.—Silver Cup	50 0 0	
*North Country Cheviot Sheep Society—Silver Cup	25 0 0	
*Dundee Citizens' Perpetual Silver Challenge Cup	75 0 0	
Society of Border Leicester Sheep Breeders	20 0 0	
Oxford Down Sheep-Breeders' Association	11 0 0	
*Sir William Prince-Smith, Bt.—Silver Cup		
Suffolk Sheep Society	15 0 0	
		1,304 0 0

GOATS.

Department of Agriculture for Scotland	£20 0 0	
*The late Lord Dewar—Silver Cup	38 0 0	
		58 0 0

PIGS.

*Dundee Citizens' Perpetual Silver Challenge Cup	£75 0 0	
National Pig-Breeders' Association—Medals and Prize Money	40 0 0	
Large Black Pig Society (and 2 Medals)	5 0 0	
		120 0 0

POULTRY.

*Messrs W. Binnie & Son—Champion Challenge Silver Salver		45 0. 0
--	--	---------

HONEY.

*The Scottish Beekeepers' Association—Silver Cup	£25 0 0	
*Mrs J. E. Robertson—Brass Challenge Skep		
The Scottish Beekeepers' Association (and 2 Medals)	10 10 0	
		35 10 0

Carry forward £11,079 0 0

* Challenge Prizes.

ABSTRACT OF PREMIUMS—*continued*

Brought forward £11,079 0 0

HORSE-SHOEING AND SHOE-MAKING.

Worshipful Company of Farriers, London—Gold Medal	£20 0 0
Bairds & Scottish Steel Ltd., Glasgow	10 0 0
William Martin, Sons & Co., Coatbridge	10 0 0
Neilson & Cleland, Ltd., Coatbridge—2 Canteens of Cutlery	13 0 0
Capewell Horse Nail Co., Bristol—Gold Medal	
	53 0 0

LIVE STOCK JUDGING COMPETITION.

*Messrs George Outram & Co., Ltd., Glasgow—' Glasgow Herald ' Challenge Cup	75 0 0
	<u>£11,207 0 0</u>

* Challenge Prize.

R. M. LEMMON, *Secretary*.

8 EGLINTON CRESCENT,
EDINBURGH 12. *February 1949.*

**SILVER MEDALS FOR NEW OR
IMPROVED IMPLEMENTS.**

See Regulations on page 16.

**The Society's Show for 1950 will be held
in the Glasgow Division.**

MEMBERS ADMITTED SINCE THE LIST WAS PUBLISHED IN 1948

ARRANGED ACCORDING TO SHOW DISTRICTS

(ELECTED 2ND JUNE 1948, 5TH JANUARY 1949, AND 1ST JUNE 1949.)

1.—GLASGOW DIVISION

ARGYLL

Admitted
1949 Anderson, Miss Elizabeth Helen,
Sandbank, Airds Bay, Taynuilt
1948 Baird, John, Caolasnacone, Ballach-
ullish
1949 Bawtree, Kenneth Scott, Barbreck,
Kilchrenan
1948 Brodie, Provost J. M., 73 Argyll
Street, Lochgilphead
1948 Bruce, George, Home Farm, Bridg-
end, Islay
1949 Campbell, Alexander, Arduaine, by
Oban
1949 Campbell, Major Iain Arthur,
Arduaine, by Oban
1949 Campbell, Ilay, Yr. of Succoth,
Craræ Lodge, Minard
1948 Campbell, John, Auchnashelloch
Farm, Kilmichael-Glassary, by
Lochgilphead
1949 CAMPBELL, Lady, of Arduaine, by
Oban
1949 Campbell, Malcolm, Ardalanish, Bun-
essan, Isle of Mull
1949 Cranston, John Haddow, Islay Estate
Office, Bridgend, Islay
1949 Dixon, J. S. Douglas, of Asknish,
Lochgair
1949 Fleming, Andrew, National Bank of
Scotland Ltd., Oban
1949 Fletcher, Edward, Persabus, Port
Askaig, Islay
1948 GAINFORD, Lady, Taynish, Tayvallich,
by Lochgilphead
1948 Gillies, D. J., Tayvallich, by Loch-
gilphead
1949 Henry, Samuel, Estate Office, Ard-
tornish, Morvern
1948 Kerr, Mrs. Conaglen, Ardgour
1949 Laing, Mrs J. M., Kellan Mill, Aros,
Mull
1948 Lamont, Robert, Killellan, Toward
1948 M'Arthur, Duncan, The Meadows,
Campbeltown
1948 Macarthur, Duncan C., Brackley
Farm, Lochgilphead
1948 M'Arthur, Hugh, Kilmory Farm, by
Lochgilphead
1948 M'Arthur, Neil, Fort Argyll, Campbel-
town
1948 M'Arthur, Peter, Brackley Farm, by
Lochgilphead
1949 M'Callum, Major Duncan, M.C., M.P.,
Ardanaiselg, Kilchrenan, by Tay-
nuilt
1949 M'Callum, Mrs Duncan, Ardanaiselg,
Kilchrenan, by Taynuilt

Admitted

1948 M'Callum, Ian, Tibertich Farm, Kil-
martin, by Lochgilphead
1948 MacCallum, John, Farm Manager,
Mingary Farm, Kilchoan
1948 M'Coll, Duncan, Glenure Farm,
Fasnacloich
1948 M'Gill, Neil, Arichonan Farm, by
Lochgilphead
1948 M'Kellar, John, 63 Lochnell Stree*
Lochgilphead
1949 Mackenzie, Ian, Crinan, by Loch-
gilphead
1948 M'Neill, Neil, Dunamuck Farm, Kil-
michael-Glassary, by Lochgilphead
1948 M'Vicar, John, Blarbuie Farm, by
Lochgilphead
1949 Malcolm, Lieut.-Colonel G. I., of
Poltalloch, Kilmartin
1948 Menzies, Hector, 4 Poltalloch Street,
Lochgilphead
1948 Mundell, Ben, Merchant, Tarbert
1948 Paterson, John, Garvachy Farm,
Minard
1948 Smith, H. D., Balliemore, Kilmichael-
Glassary, by Lochgilphead
1948 Smith, Patrick M'Kenzie, Lerags,
Oban
1948 Smith, S. L., Stag Hotel, Lochgilp-
head
1948 Sprott, J. K., Ellerie, Fasnacloich,
Appin
1948 Stewart, Charles Kenneth Moncreiff,
Acha Hoose, Isle of Coll
1948 TRENT, Lord, Glenborrodale, Achar-
acle
1948 Wilson, Mrs D. G. H., Drimvore,
Kilmichael-Glassary, Lochgilphead

AYR

1949 Anderson, Andrew, Clinchyard, Hurl-
ford, Kilmarnock
1949 Breckenridge, J. C. (E. J. Jobling-
Purser & Co. Ltd.), North Crescent,
Ardrossan
1949 Bryson, William H., Whiteflat,
Catrine
1948 Cochrane, Alexander, jun., Nether
Craig, Kilmarnock
1948 Cochrane, John, Manraehead, Belth
1949 Donald, Robert, Ballochmorrie, Pin-
wherry
1948 Goldie, James D., Milton Farm,
Galston
1948 Goldie, William, Barassie Farm, Troon

Admitted

- 1948 Graham, John, C.A., Assistant Secretary, Ayrshire Cattle Herd Book Society, 1 Racecourse Road, Ayr
 1949 Guthrie, Mungo F., Commonhead, Kilmarnock
 1949 Harris, Gerald (Scottish Farm Implements Ltd.), Crosshouse, Kilmarnock
 1949 Henderson, David K. (John Wallace & Sons (Ayr) Ltd.), Townhead Works, Ayr
 1948 Hood, Miss J. L., N.D.D., 13 Holmes Road, Kilmarnock
 1948 Jardine, James M., Ayrshire Cattle Herd Book Society, 1 Racecourse Road, Ayr
 1948 Lindsay, George D., Blackbyres, Kilmarnock
 1948 M'Gregor, Ian, Cairngillan Farm, Tarbolton, by Mauchline
 1948 M'Kellar, William T. (John Lees & Co., Ltd.), Townend Factory, Maybole
 1948 M'Kinnon, John, Stanley Farm, Ardrossan
 1948 MacQuaker, Mrs C., Brae of Auchendrane, Ayr
 1948 MacQuaker, T. M., Brae of Auchendrane, Ayr
 1949 Manson, James, Highfield, Ayr
 1948 Menzies, William, Holehouse, Largs
 1948 Montgomerie, Archie, Littlestone Farm, Irvine
 1949 Murchland, Robert, Ladeside, Fenwick, Kilmarnock
 1949 Parker, James, Millrig, Skelmorlie
 1949 Richmond, James Henderson, High Grange, Maybole
 1949 Richmond, Matthew, jun., Loch Brae, Knockdon, Maybole
 1949 SELKIRK, The Earl of, O.B.E., A.F.C., Eldo House, Prestwick
 1948 Semple, James Shaw, Genoch Farm, Ayr
 1948 Semple, John, Netherton, Dalrymple
 1948 Stevenson, James M., Bankend, Cumnock
 1948 Stevenson, John, Changue, Cumnock
 1948 Stevenson, William S., Crofthead, Cumnock
 1948 Stewart, Archibald James, Royal Bank of Scotland, Kilmarnock
 1949 Templeton, George, Knowe, Auchinleck
 1948 Templeton, Robert, Pocknave, Hurlford
 1949 Thompson, John (John Wallace & Sons (Ayr) Ltd.), Townhead Works, Ayr
 1949 Tivendale, William, A.M.I.C.E., c/o Hutchison, 22 Arrol Drive, Ayr
 1948 Wardrop, Oswald, Yonderfield Farm, West Kilbride
 1948 Wardrop, Robert, Yonderfield Farm, West Kilbride
 1948 Wilson, Robert, Clanfin, Kilmarnock
 1949 Woodburn, Robert, Boreland, Hollybush

BUTE

- 1948 Beach, Colonel W. J. G., M.B.E., Bute Estate Office, Rothesay
 1948 Crawford, Robert, Langalchorad, Rothesay
 1948 Currie, James, Drumadoon, Blackwaterfoot, Arran

LANARK

Admitted

- 1948 Adamson, John, South Holm, Pettinain, Lanark
 1948 Alexander, J., Moat House, Lesmahagow
 1948 Alexander, Thomas, Huntlyhill Mains, Lanark
 1948 Allison, Robert, The Greens, Carnwath
 1948 Allison, William B., Carnwath Mill, Carnwath
 1949 Baillie, Ronald, Hyndshaw, Carlisle
 1948 Baker, Ronald E., c/o Messrs Spillers, Ltd., 95 Bothwell Street, Glasgow, C.2
 1948 Bankier, Mrs A. F., Gartloch Farm, Gartcosh
 1948 Barr, A., jun., Heatherlyhall, Thankerton, Biggar
 1949 Barr, James, Dunsyre Mains, Dunsyre
 1948 Barr, William, Muirfoot, Lanark
 1948 Barrie, T. W., Porclands, Biggar
 1948 Barrie, W., Mossplatt, Lanark
 1948 Barrie, William, Wester Walston, Dunsyre
 1948 Begg, Hugh, F.R.C.V.S., 6 Rylands Street, Strathaven
 1948 Bell, G., Drumelzier, Broughton, Biggar
 1948 Bell, Thomas C., Stravenhouse Farm, Carlisle
 1948 Bennet, Mrs, Springhill Farm, Baillieston, Glasgow
 1948 Bertram, John, No. 1 Holding, Strawfrank, Carstairs
 1948 Bertram, Joseph, Gladstone-Boreland, Biggar
 1948 Biles, A. V., Longcalderswood Farm, East Kilbride
 1948 Blackie, W., Firholm, Biggar
 1948 Blackwood, Archibald M.A., Hill of Kilmacadzow, Carlisle
 1949 Blair, A. D. (Roxburgh, Morgan & Co., Ltd.), 41-43 Cavendish Street, Glasgow, C.5
 1949 Bowie, Matthew, 88 Balmuildy Road, Bishopbriggs
 1949 Brookman, John (S.C.W.S.), 84 Morrison Street, Glasgow
 1948 Brown, David, Brackenhirst Farm, Airdrie
 1948 Brown, J., Hillrigs, Biggar
 1949 Brown, James Charles (Cooper, M'Dougall & Robertson (Scotland), Ltd.), 62 Robertson Street, Glasgow, C.2
 1948 Brownlee, Robert, Cairneyhead, Shotts
 1948 Brownlie, James, Chapel Farm, Hamilton
 1948 Buchanan, James C., Oakfield, Lenzie (Lanarkshire)
 1948 Buchanan, John A., Symington Mains, Symington, Biggar
 1948 Burns, Robert (Morris, Warden & Co., Ltd.), 90 Mitchell Street, Glasgow, C.1
 1948 Carmichael, John, V.C., Hagmuir Farm, Glenboig
 1948 Carmichael, Mrs John, Hagmuir Farm, Glenboig
 1948 Carslaw, William, "Rockmount," 25 Nether Auldhouse Road, Glasgow, S.3
 1948 Chalmers, Robert, Allers Farm, East Kilbride
 1948 Clark, John, Westraw, Pettinain, Lanark
 1949 Clarkson, David R., Cloburn, Thankerton, Biggar
 1948 Colthart, J. W., Burghmuir, Biggar
 1948 Cooper, I., Burnhouse, Carnwath

Admitted

- 1948 Corbett, T. Bryson, Avonholm, Glassford, Strathaven
 1948 Corbett, Mrs T. Bryson, Avonholm, Glassford, Strathaven
 1949 Cowper, William, 139 Menock Road, Glasgow, S.4
 1948 Craig, A., Easton, Dolphinton, Biggar
 1948 Craig, John, Normangill, Crawford
 1948 Craig, William G. A., Normangill, Crawford
 1948 Cree, Andrew G., 'Daily Express', 195 Albion Street, Glasgow, C.1
 1948 Cullen, James, Craighead, Carluke
 1948 Cullen, William, Westerhouse, Carluke
 1948 Outhill, George, Castlehill, Carluke
 1949 Dawson, Andrew, 40 Queen Mary Avenue, Glasgow, S.2
 1948 Dawson, Joseph, Dovehill, Newlands, Glasgow
 1948 Dawson, Thomas, 176 Dunn Street, Bridgeton, Glasgow
 1948 Doble, William, Garrionhaugh, Wishaw
 1948 Donald, J., Pettinain Bank, Pettinain, Lanark
 1948 Dykes, Robert, Nether Affleck, Lanark
 1948 Fleming, A., Warrenhill, Thankerton, Biggar
 1948 Fleming, James, Bogside, Dalsersf
 1948 Fleming, J. W., Kinnox, Douglas
 1948 Forrest, D., Muirlea, Biggar
 1948 Forrest, George, Blackhall, Shotts
 1948 Frame, G., Greenbank, Carluke
 1948 Galloway, Alex. C., Lochlyock, Kirk-michael, Biggar
 1949 Galloway, James W., 11 Cleland Street, Glasgow, C.5
 1948 Gilmour, Archibald G., West Crosshill, East Kilbride
 1948 Gilmour, Arthur, jun., Righead, East Kilbride
 1948 Gilmour, George M., West Crosshill, East Kilbride
 1949 Gilmour, James, Burnbrae, Strathaven
 1948 Graham, Andrew, Dyke, Harthill
 1949 Greenlees, Arthur L. (Robertson Rubber Co., Ltd.), 421 Sauchiehall Street, Glasgow, C.2
 1948 Guild, D. L., Auchengruth, Sanquhar (Lanarkshire)
 1948 Hamilton, A., Pool, Auchengray
 1948 Hamilton, James, Headsmuir Farm, Carluke
 1948 Hamilton, Lennox, East Nerston Farm, East Kilbride
 1949 Hamilton, Thomas, c/o Alexander Cross Seed Co., Ltd., 21 Hope Street, Glasgow, C.2
 1948 Harrison, George, Hillaide, Lesmahagow
 1948 Harrison, W., Bankhead, Lesmahagow
 1949 Henderson, David (Clyde Agricultural Committee), 22A West Nile Street, Glasgow
 1948 Henderson, J., Westfield, Coulter, Biggar
 1949 Henderson, James R., 30 North Wallace Street, Glasgow
 1949 Howie, John M., 26 Muirhill Avenue, Muirend, Glasgow, S.4
 1949 Ingall, Leonard (Ruston & Hornsby, Ltd.), 42 Bothwell Street, Glasgow, C.2
 1949 Jack, Peter Christie, N.D.A., Wester Daldowie House, Broomhouse, Lanarkshire
 1948 Jackson, H., Wolfclyde, Biggar
 1949 Jennison, Richardson Frank (Agricultural Section, G.E.C.), 71 Waterloo Street, Glasgow
 1949 Johnston, Mrs Agnes G., 12 Annfield Place, Glasgow, E.1

Admitted

- 1948 Johnston, W., Cobblehaugh, Lanark
 1948 Johnston, W., Hillhead, Thankerton, Biggar
 1948 Kirkland, A., Middlehouse, Carluke
 1948 Lamb, John A., Boreland, Lesmahagow
 1948 Lambie, J., jun., Bamflatt, Biggar
 1949 Law, Miss Jean, East Hallhill, Baillieston
 1948 Lennox, T. J., Stonehill, Crawford-John, Abington
 1948 Lindsay, D. M., Harperfield, Sandilands, Lanark
 1948 Lindsay, J. W., Bushelhead, Carluke
 1948 Logan, R. J., Eastshield, Carnwath
 1948 Logan, W. D., Eastshield, Carnwath
 1949 Lohar, John G., jun., Whitlawburn, Cambuslang
 1948 Lyon, J., Quothquan Mill, Thankerton, Biggar
 1948 M'Arthur, A., 219 Croftfoot Road, Glasgow
 1948 M'Donald, A. D. L., Hamilton & Kin-nell Estates, Ltd., Muir Street, Hamilton
 1948 M'Donald-Lockhart, S. F., Lea & Carnwath Estates Office, Carnwath
 1948 M'Kinley, Frank, 17 Kilbarchan Street, Glasgow, C.5
 1948 M'Lachlan, Alex., C.A., 851 Colston Road, Glasgow, N.W.
 1948 MacLachlan, Angus, Causeyhead Farm, East Kilbride
 1948 M'Lellan, D., 92 Dunlop Street, Glasgow
 1948 Macleod, Ian (George Macleod, Ltd., Fruit Market, Glasgow, C.1
 1949 M'Nab, Neil, B.Sc.(Agric.), N.D.A., 35 Rhannan Road, Glasgow, S.4
 1949 Miller, Carl Sydney (S.C.W.S.), 84 Morrison Street, Glasgow
 1948 Miller, J. K. (George Macleod, Ltd.), Fruit Market, Glasgow, C.1
 1948 Minto, J., jun., Coulterhaugh, Biggar
 1949 Mitchell, Miss Margaret D., Langieles, Biggar
 1948 Moffat, John, Bowridge, Carluke
 1948 Moffat, William, East Tarbrax, Shotts
 1948 Muir, James, The Neuck, Lesmahagow
 1948 Murdoch, John Alastair, Jellyhill Farm, Bishopbriggs
 1949 Murdoch, John Watson, 81 Hope Street, Glasgow
 1949 Neil, George H., Haydale, Tollcross, Glasgow, E.2
 1949 Neill, Andrew, F.C.I.S. (Andrew Motherwell, Ltd.), 783 Clarkston Road, Netherlee, Glasgow, S.4
 1948 Pate, Robert, Muirland, Kirkmuirhill, by Lanark
 1949 Paterson, James (Stewarts & Lloyds, Ltd.), 41 Oswald Street, Glasgow, C.1
 1948 Pollock, G., Collierhall, Douglas Water
 1948 Ramage, A., Moorfoot, Douglas Water
 1949 Ross-Taylor, Mrs Patricia C., Wandel, Abington
 1949 Russell, Thomas, Post Office, Pettinain, Lanark
 1948 Russell, Thomas, Walkerdyke, Strathaven
 1948 Russell, W., Bankhead, Carnwath
 1949 Samuel, William, 8 Grove Park, Lenzie, Glasgow
 1948 Sanderson, T. W., Shielsmains, Biggar
 1948 Sandilands, Gavin, Flatt Farm, East Kilbride
 1949 Scott, James Moffat (Cooper, M'Dougall & Robertson (Scotland), Ltd.), 62 Robertson Street, Glasgow, C.2

Admitted

- 1948 Scott, T. S., Midtown, Douglas
 1948 Shearer, W., Toftcombs, Biggar
 1949 Sheridan, John D., "Tonneller," Maryhill Park, Glasgow
 1948 Smith, R. G., "Gregagh," Cumbernauld Road, Millerston, Glasgow
 1948 Stevenson, Robert, Langshaw, Carlisle
 1949 Stewart, James, West Dykes Farm, Strathaven
 1948 Struthers, A., Thorniehill, Lanark
 1948 Taylor, A., Candyburn, Biggar
 1948 Taylor, Joseph, Fullwood, Carlisle
 1948 Taylor, William, General Manager, British Bitumen Emulsions, Ltd., 63 Clouston Street, Glasgow
 1949 Toole, P. F. O., 17 Crosbie Street, Maryhill, Glasgow
 1948 Twaddie, Lancelot, jun., Upper Carbars, Wishaw
 1949 Tweddle, Thomas, c/o Alexander Cross Seed Co., Ltd., 21 Hope Street, Glasgow, C.2
 1948 Tweedie, T., Brownsbank, Biggar
 1949 Walker-Love, James, Greenbank, Clark Street, Airdrie
 1948 Wallace, James, Boreland, Dunsyre, Lanark
 1948 Warnock, J., Sandilands, Lanark
 1948 Warnock, Mrs J. H., Garrion Farm, Wishaw
 1948 Warwick, D., Eskdale, Carstairs
 1948 Watson, John, Hangingshaw, Coulter, Biggar
 1948 Watson, John, Laigh Knoweglass, East Kilbride
 1948 Watson, J. L., Newton, Wiston, Biggar
 1948 Weir, Charles S., Roslyn, South Biggar Road, Airdrie
 1948 Willan, R., 52 Walton Road, Carlisle
 1948 Wilson, A., Fallside, Lamington, Biggar
 1948 Wilson, Andrew, Lambhill, Strathaven
 1948 Young, J., Cormiston, Biggar
 1948 Young, Thomas, Uppershieldhill Farm, Carlisle
 1948 Young, W., Easter Whitecastle, Biggar

RENFREW

Admitted

- 1948 Aram, James, Floors Road, Eaglesham
 1949 Baird, William T., jun., Cornalces, Greenock
 1949 Berrle, Graham M., 8 Lanfine Road, Paisley
 1948 Brown, Miss Winifred, Craigton, Blahopton
 1949 Christison, John, Crossveggate, Milngavie (Renfrewshire)
 1949 Christison, William, Crossveggate, Milngavie (Renfrewshire)
 1948 Galloway, Miss Patricia M. S., N.D.D., Duntrune, Elderslie
 1949 Gillespie, J. Kerr, Fauldhead, Neilston
 1948 Gourlay, Mrs Phyllis M. R., Rualg, 97 Eastwoodmains Road, Clarkston
 1949 Hay, Samuel, Ruffles, Barrhead
 1948 Howie, John M., Flatterton Farm, Inverkip, by Greenock
 1948 Howie, William, Bogside Farm, Inverkip
 1949 INVEROLYDE, Lord, D.L., of Castle Wemyss, Wemyss Bay
 1948 Kerr, John G., Neilstonside, Neilston
 1949 Lelcho, Peter N., N.D.A., 40 Stamperland Hill, Clarkston
 1948 McLaren, Samuel, Farm Manager, West Dykebar Farm, Paisley
 1948 Park, William, North Forton, Bishopston
 1949 Smith, Alastair M. (The British Oil and Cake Mills, Ltd.), 111 Monteith Drive, Clarkston
 1948 Stirrat, James, Fernlea, 25 Greenock Road, Paisley
 1948 Stirrat, Mrs James, Fernlea, 25 Greenock Road, Paisley
 1948 Whiteford, John M., Nether Southbar, Inchinnan
 1949 Wilson, Miss Margaret B., 587 Shields Road, Pollokshields, Glasgow, S.1
 1948 Wilson, Thomas D., Kilmartin, Neilston
 1948 Wilson, Mrs T. D., Kilmartin, Neilston
 1948 Young, Robert H., Fullwood Mains, Houston

2.—PERTH DIVISION

ANGUS

(WESTERN DISTRICT)

- 1949 Adam, Robert, 10 Malcolm Street, Dundee
 1949 Appleby, Ernest William (Dundee Pasteurised Milk Co. Ltd.), 62 Mains Road, Dundee
 1949 Archie, A. E., South Leckaway, Forfar
 1949 Bell, Thomas, Alton, Wyllie Street, Forfar
 1948 Bentley, Captain K. J., M.N., Balmuir, by Dundee
 1948 Boggan, Alexander Henry, B.Sc. (Agric.), Department of Agriculture for Scotland, 21 Albany Terrace, Dundee
 1949 Booth, A. B., Ardestie, Monifieth
 1949 Booth, W. C., Ashludie, Monifieth
 1948 Brand, Charles, 45 Commercial Street, Dundee
 1949 Brown, D. P., 19 King Street, Dundee

- 1949 Cant, Alexander, Craigton, Monikie
 1949 Cant, Robert, Craigton, Monikie
 1949 Cooper, T. P., Govals, Forfar
 1949 Coufts-Duffus, James, of Claverhouse, The Mansion House, Claverhouse, by Dundee
 1949 Cowpar, K., Over Migvie, Kirriemuir
 1949 Craib, Miss E. E., Greenmyre, Kirriemuir
 1949 Crichton, William M., Parkford Farm, Forfar
 1948 Dargie, Miss Janet Mercer, 14 Shamrock Street, Dundee
 1949 Davidson, Robert, 24 Holding, Barns of Claverhouse, Dundee
 1948 Dewar, Ronald Fraser, B.Sc., N.D.A., 60 Balgillo Road, Broughty Ferry
 1949 Douglas, H. C., The Angus Milling Co., Ltd., Kirriemuir
 1949 Douglas, Mrs H. C., Inglenek, Brechin Road, Kirriemuir
 1949 Duffus, John Coufts, The Mansion House, Claverhouse, by Dundee
 1949 Durston, E. K., Glasswell, Kirriemuir

Admitted

- 1949 Fairlie, Dennis W. W., Kirkton, Monikie, by Dundee
 1949 Fairlie, Patrick J. M., Kirkton, Monikie, by Dundee
 1949 Findlay, James, Hatton of Newtyle, by Dundee
 1948 Findlay, James, jun., Bogardo, Forfar
 1949 Forbes, Lieut.-Colonel L. C., Mid Newlandhead, Monikie, Dundee
 1949 Forbes, Mrs L. C., Mid Newlandhead, Monikie, Dundee
 1949 Fotheringham, Major T. S., Fotheringham, by Forfar
 1949 Fyvie, G. F. J., Affleck House, Monikie, Dundee
 1949 GAMMELL, Sir James, Alrick, Glenisla, Alyth (Angus)
 1949 Gerrie, Robert, No. 2 Holding, Framedrum, Forfar
 1949 Gibb, J. H. C., Glenisla House, Alyth (Angus)
 1949 Grant, David, Newmill of Kinnordy, Kirriemuir
 1949 Greenhill, Joseph Dalgety, South Mains Farm, Forfar
 1949 Hamilton, H., Dronley, Dundee
 1949 Hibberd, Brigadier F. A., C.B.E. (St Roque's Automobile Co. Ltd.), 64 Ward Road, Dundee
 1949 Hutton, William Buchan (Numire, Ltd.), 48 St Andrews Street Dundee
 1949 Irvine, S. R. (Charles Irvine & Sons, Ltd.), 64 West High Street, Forfar
 1949 Johnstone, J. K., Newton Park, Kirriemuir
 1949 Justice, R. S., 15 Whitehall Street, Dundee
 1948 Kennedy, Archibald David, Ballinshoe, Kirriemuir
 1949 Kennedy, Lieut.-Colonel R. W. R., D.S.O., Wellbank Mains, Monikie, Angus
 1949 Laird, Mrs E. R., Taybank, Monifeth, Angus
 1949 Laird, Mrs I. M., Fountainbrae, Monifeth, Angus
 1949 Laird, W. P., Craigie Home Farm, by Dundee
 1949 Laird, Mrs W. P., Craigie Home Farm, by Dundee
 1949 Lamb, James C. (Lamb's Garage Ltd.), 41 Trades Lane, Dundee
 1949 Lang, James, Cortachy Home Farm, Kirriemuir
 1949 Lang, Thomas Crawford, Cortachy Home Farm, Kirriemuir
 1949 Lemon, Alan C., 68 Mains Drive, Maryfield, Dundee
 1948 Lindsay, Miss Agnes, Cairnleith, Kirriemuir
 1948 Lindsay, William N., Cairnleith, Kirriemuir
 1949 Low-Mitchell, Lachlan G., Clochtow, near Forfar
 1949 Low-Mitchell, Miss Sheila B., Clochtow, near Forfar
 1949 Lyburn, Alexander S. Corston, Coupar-Angus
 1949 Lyburn, James, Newton of Glamis, Glamis, Angus
 1949 Lyburn, William A., Burnmouth, Newtyle, Angus
 1949 Lyell, David C., "Langlands," Glamis Road, Forfar
 1949 MacDonald, Brigadier W. R., T.D. (St Roque's Automobile Co. Ltd.), 64 Ward Road, Dundee
 1949 McGlashan, Alex., Harestane, Downfield, Dundee
 1949 McIntyre, Mrs Janet L. Reid, Cullew, Cortachy, Kirriemuir
 1949 Mackay, Charles (Department of Agriculture), 21 Albany Terrace, Dundee

Admitted

- 1949 Mackenzie, William S., West Mains, Gagle, Broughty Ferry
 1948 Mackintosh, Angus James, Department of Agriculture for Scotland, 21 Albany Terrace, Dundee
 1949 Mackintosh, H. H., Agricultural Engineer, North Street, Forfar
 1949 Mackintosh, James, Agricultural Engineer, North Street, Forfar
 1949 McKnight, Miss Annie, Hayston, Forfar
 1948 McLean, George, 30 Ward Road, Dundee
 1949 Marshall, W. W., Kirkton Farm, Newtyle
 1949 Melvin, A. M., 96 Balgillo Road, Broughty Ferry
 1949 Mitchell, J. S., Pitkerro, Broughty Ferry
 1949 Mitchell, Mrs J. S., Pitkerro, Broughty Ferry
 1949 Morrison, Lieut.-Colonel D. W. M., O.B.E., M.C., Balhungle, Monifeth, Angus
 1949 Paterson, H. R., 13 Panmure Street, Monifeth
 1949 Paterson, William W., East Grange, Kincaldrum, Forfar
 1949 Philip, P. (North of Scotland Hydro-Electric Board), Dudhope Crescent Road, Dundee
 1949 Ramsay, D. A., Mains of Inverieghty, Forfar
 1949 Ramsay, Robert S., 61 West High Street, Forfar
 1949 Reekie, James G., Melkie Kilmundie, Glamis, Angus
 1949 Robb, John M., 31 Adelaide Place, Dundee
 1949 Robertson, John, Heatherstacks, Forfar
 1949 Robertson, J. S., Berryhillock, Glamis
 1949 Russell, John, Knockenny, Glamis, Angus
 1949 Scott, Andrew, jun., 15 Barns of Claverhouse, Dundee
 1949 Scott, R. M., Middle Brighty, Dundee
 1949 Stenson, G. C., 200 Strathmartine Road, Dundee
 1948 Stewart, James, C.D.A., Department of Agriculture for Scotland, 21 Albany Terrace, Dundee
 1949 Stewart, Captain William, 40 Castle Street, Dundee
 1949 Stewart, Mrs William, 40 Castle Street, Dundee
 1949 Struthers, Hugh, East Nevay, Eassie, Angus
 1949 Struthers, Michael, North Nevay, Eassie, Angus
 1949 Stuart, Mrs Innes, Ethie Mains, Inverkeilor
 1949 Swan, D. S., North Grange, Monifeth, Angus
 1949 Syme, William, M.B.E., B.Com., C.A., Balbeuchley, Auchterhouse
 1949 Thomson, Robert E., 53 Long Lane, Broughty Ferry
 1949 Torrie, David, The Angus Milling Co., Ltd., Kirriemuir
 1949 Valentine, W. H., The Mansion House, Auchterhouse, by Dundee
 1949 Wallace, John, Balmaydown, Dundee
 1949 Watson, David, 120 Balgillo Road, Broughty Ferry
 1948 Watson, Robert Scott, Downleken, Newbigging, Kingennie
 1949 Welch, R. M., 2 Crichton Street, Dundee
 1949 Whitton, Miss Isma, Ingliston, Eassie, Angus
 1949 Whitton, Mrs Isobel, Ingliston, Eassie, Angus

Admitted

- 1949 Whyte, Mrs A. E. M., Hatton of Eassie, Eassie, Angus
 1949 Whyte, Miss Nancy, Hatton of Eassie, Eassie, Angus
 1949 Whyte, P. J., Hatton of Eassie, Eassie, Angus
 1949 Wilson, John S., Kemphills, Kirkbuddo, Forfar
 1949 Wilson, Mrs J. S., Kemphills, Kirkbuddo, Forfar
 1948 Young, Charles, Shlehill, Tealing, by Dundee

FIFE

- 1949 Adamson, David, jun., Daubs Farm, Auchtermuchty
 1949 Adamson, Henry, West Friarton, Newport
 1949 Adamson, William Bernard, Plains Farm, Auchtermuchty
 1949 Ald, Miss Elizabeth, Balbeardie Farm, by Kirkcaldy
 1949 Ald, Henry, Balbeardie Farm, by Kirkcaldy
 1949 Ald, James, Balbeardie Farm, by Kirkcaldy
 1949 Ald, John, Balbeardie Farm, by Kirkcaldy
 1949 Allan, Andrew, St Ford, Elie
 1949 Alston, William, Brackmont Farm, Leuchars
 1949 Balfour, David Grant, Craigard, Tayport
 1949 Balfour, Mrs D. B., Craigard, Tayport
 1949 Balfour, John C., M.C., Balbirnie, Markinch
 1949 Ballantyne, John, Balkalthly, St Andrews
 1949 Barr, Andrew, Hallhill, Colleslie
 1949 Barr, John, Hallhill, Colleslie
 1949 Barr, William, Hallhill, Colleslie
 1948 Bayne, John, Nether Magask, St Andrews
 1949 Bell, William S., Kirktonbarns, Tayport
 1949 Bisset, William, 20 Grange Road, Burntisland
 1949 Black, Hugh, Newton of Colleslie, Colleslie
 1949 Black, James, Drumcarro, Cupar
 1949 Black, Neil, Drumcarro, Cupar
 1949 Boyd, William, Blairneuk, Cupar
 1949 Brooks, James, Letham View, Inverkeithing, Dunfermline
 1948 Brough, Robert, 97 Strathkinnes Road, Kirkcaldy
 1949 Brown, John, sen., Burnside, Boarhills
 1949 Brown, John, jun., Stonywynd, Boarhills
 1949 Brown, Robert, Lochty, Pittenweem
 1949 Brown, William Steven, Burnside, Boarhills
 1949 Bruce, Hon. J. M. E., Broomhall, Dunfermline
 1949 Burns, Andrew Steven, Broomlees, Kilconquhar
 1949 Calder, Arthur J., Royal Bank of Scotland, Cupar
 1949 Cant, A. B., Park Cottage, Limekilns
 1949 Carlou, C. Augustus, D.L., Kincaide, St Andrews
 1949 Cathcart, Mrs P. V., Pitcairrie, Newburgh
 1949 Clark, Alexander B., 37 Garvock Hill, Dunfermline
 1949 Clark, John G. T., Pipeland, St Andrews

Admitted

- 1949 Cochran, Major Hon. T. G., D.S.O., Crawford Priory, Cupar
 1949 Cook, David Cairns, Clydesdale Bank, Ltd., Anstruther
 1948 Cousland, Robert Lang, Bankhead, Thornton
 1949 Crichton-Stuart, Major Michael, Falkland Palace, Falkland
 1948 Cruickshank, Allan, Cluny Sawmill, Kirkcaldy
 1949 Cunningham, Ord A., Elgin Cottage, Carnock Road, Dunfermline
 1949 Dick, Dougal W. H., Transylaw, Dunfermline
 1949 Drummond, Eric, Raecruik, Dunshelt
 1949 Duff, Alexander, 30 Main Street, Kingseat, Dunfermline
 1949 Easson, Miss M., 15 Transy Grove, Dunfermline
 1949 Edie, David Hay, Cornceres, Anstruther
 1949 Edie, Mrs Freda Hall, Cornceres, Anstruther
 1948 ERSKINE, Sir David, Bt., of Cambo, Kingsbarns
 1948 Erskine, Mrs Grace G. K., Myrend Farm, Cairneyhill, by Dunfermline
 1949 Ferguson, Thomas Russell, Grange of Lindores, Newburgh
 1949 Ferguson, William Crawford, Grange of Lindores, Newburgh
 1949 Forrester, Alexander, Luthriebank, Luthrie, Cupar
 1948 Forrester, Marshall, Luthriebank, Luthrie
 1948 Forrester, Robert, Broombrae, Auchtermuchty
 1949 Forster, Mrs Muriel, Peacehill, Wormit
 1949 Forster, Thomas, Peacehill, Wormit
 1949 Gellan, Alexander, Mayfield, Carnock Road, Dunfermline
 1949 Gellan, Raymond A., Farm House, Kingseat, Dunfermline
 1948 Graham, Robert L., Balone, St Andrews
 1948 Graham, Stanley, Urquhart Farm, Dunfermline
 1948 Graham, T. J., Urquhart Farm, Dunfermline
 1948 Graham, William F., Claremont, St Andrews
 1948 Hardie, James S., 22 Paterson Park, Leslie
 1949 Hardie, Leslie, Gallowridgehill Farm, Dunfermline
 1949 Henderson, Alexander, 5 Church Street, Kirkcaldy
 1949 Humble, Robert, Farm Manager, Balfarg, Markinch
 1949 Hutchison, A. O. (R. Hutchison & Co. Ltd.), Kirkcaldy
 1949 Hutchison, Joseph Douglas, Kinloch, Ladybank
 1949 Inglis, J. W. C., V.S., 58 Appin Crescent, Dunfermline
 1948 Jamieson, John (Carnegie & Grant), 20 High Street, Burntisland
 1949 Kennedy, Alexander, Balchristie Farm, Colinsburgh
 1949 Kennedy, Alexander, jun., Balchristie Farm, Colinsburgh
 1949 Kennedy, Alexander, Parknowe Farm, Dalraie
 1949 Kennedy, Duncan, Morton Farm, Kingsbarns
 1949 Kennedy, Mrs F. P., Blackhall Farm, Dunfermline
 1949 Kennedy, W. G., Balchristie Farm, Colinsburgh
 1948 Kilgour, Ian W., "Briarcliff," Lady Nairn Avenue, Kirkcaldy
 1948 King, J. G. (British Oil and Cake Mills, Ltd.), Foulford House, Cowdenbeath

Admitted

1948 Kinnauld, Henry, Balvaired, Gateside
 1949 Kinnauld, Thomas, Clatto, Ladybank
 1949 Laing, Mrs B. R., Woodburne, Ceres, Cupar
 1948 Laird, James, Logie, Cupar
 1948 Laird, John, jun., Logie, Cupar
 1949 Lawson, Alexander Barric, Muirhead Farm, Cardenden
 1949 Lawson, James Waddell, 9 St Catherine Street, Cupar
 1949 Lees, James Cambridge, Baldastard, Leven
 1949 Lindsay, Colonel M. E., D.S.O., D.L., Craigfoodie, Cupar
 1949 Livingston, Hugh, Broomhall Estate Office, Charlestown
 1949 Logan, James, Dairsie Mains, Cupar
 1949 McCallum, T., County Surveyor's Office, County Buildings, Cupar
 1949 MacCulloch, Donald, National Bank of Scotland Ltd., Elie
 1949 McGowan, William, Fingask, Dairsie
 1949 McInnes, Ian Whitton, W.S., Eden Park, Cupar
 1949 Mackenzie, Mrs D. B., Dunard, Bennoch Road, Kirkcaldy
 1948 McLachlan, Alan, Devonside, Saline
 1948 McLachlan, John A., Devonside, Saline
 1948 McLachlan, Miss Katherine A., Devonside, Saline
 1948 McLachlan, Miss Kathleen Henderson, Devonside, Saline
 1949 Marshall, James, 9 Transy Place, Dunfermline
 1949 Melville, Mrs Harry, Balmullo, Leuchars
 1949 Miller, Andrew R. S., Kellie Castle Farm, Pittenweem
 1949 Miller, Andrew S., Kellie Castle Farm, Pittenweem
 1949 Milloy, L. G., Station Hotel, Kirkcaldy
 1948 Milne, James, 64 High Street, Dysart
 1949 Mitchell, Thomas N., Clentrie, Kirkcaldy
 1949 Mitchell, William, 19 Wheatley Street, Methil
 1949 MORRISON-Low, Sir Walter J., Bt., Kilmarnock Castle, Cupar
 1949 MORRISON-Low, Lady, Kilmarnock Castle, Cupar
 1949 Muirhead, John L. T., Wester Cash, Strathmiglo
 1949 Muirhead, William, Stirton, Cupar
 1949 Nairn, John, Parbroath, Cupar
 1949 Nairn, John Campbell, Parbroath, Cupar
 1949 Nairn, M. G. (Michael Nairn & Co. Ltd.), Kirkcaldy
 1949 Naismith, R. S., M.R.C.V.S., 6 St Mary's Place, St Andrews
 1949 Nicol, John D., Bankhead, Windygates
 1948 Normand, W. R., c/o Leven Oil Mills, Leven
 1948 Osborne, David Fleming, Hatton, Leven
 1949 Oswald, James, Wester Grangemuir, Pittenweem
 1949 Oswald, Robert, Wester Grangemuir, Pittenweem
 1948 Paterson, James, Ingleside, Auchtermuchty
 1948 Paterson, T., East Strathore, Thornton
 1948 Paton, J., Coldstream, Leven
 1948 Peddie, Andrew M., Coalfarm, St Monance
 1948 Peddie, Donald, Coalfarm, St Monance
 1948 Peddie, Donald T., Coalfarm, St Monance
 1948 Peddie, Peter D., Coalfarm, St Monance

Admitted

1948 Pollock, James T., Balcarres Mains, Colinsburgh
 1948 Pollock, Robert, Gibleston, Colinsburgh
 1949 Porter, James Wylie, Kinneston, Leslie
 1949 Reekie, Gavin R., O.B.E., A.M.I.E.E., A.I.Mech.E., Castlebank, Cupar
 1949 Reid, Alastair, Solicitor, 34 Queen Anne Street, Dunfermline
 1949 Robb, John, Pitblado Farm, Cupar
 1948 Roberts, Alastair Smith, Hillicairnie, Cupar
 1948 Roberts, George, Hillicairnie, Cupar
 1948 Roberts, Mrs Mary Braid, Hillicairnie, Cupar
 1949 Rodger, Thomas, Marybank, Cupar
 1948 Roger, Charles Kilgour, Rungally, Cupar
 1948 Roger, Mrs C. A., Rungally, Cupar
 1948 Roger, John Aubin, Rungally, Cupar
 1948 Roger, Robert Graham, Rungally, Cupar
 1949 Roger, J. N., 27 Bowling Green Road, Cupar
 1949 Rollo, John A., Wester Forret, Cupar
 1949 Russell, Mrs Mary Braid, M., Hilton, Cupar
 1948 Rutherford, J. G., National Bank of Scotland, Ltd., Cupar
 1949 Scrymgeour - Wedderburn, Henry James, Birkhill, Cupar
 1949 Shanks, John Thomson Russell, Orkie Mill, Kingskettle
 1948 Shanks, T. M. S., Clephanton, Anstruther
 1948 Shedden, A., jun., Newton of Wemyss, East Wemyss
 1949 Simpson, Andrew, Randerston, Kingsbarns
 1949 Smith, Mrs A. C., Inverdovot, Newport
 1949 Smith, James B. W., "Dalmara," Carslogie Road, Cupar
 1949 Smith, James W., Commercial Bank of Scotland, Ltd., Thornton
 1949 Smith, William M., Provost Wynd, Cupar
 1949 Sprot, Mrs E., Stravithie Mains, St Andrews
 1949 Steven, R. M., Milton, Leuchars
 1949 Steven, William, jun., Remilton Farm, Torryburn
 1949 Stevenson, John, Bonerbo, Anstruther
 1949 Stewart, Kennedy, Waulkmill, Charlestown
 1948 Stewart-Melkielejohn, Mrs D. C. (of Edradynate), Priorsgate, St Andrews
 1949 Stirling, Mrs John, Letham Farm, Hillend, Dunfermline
 1948 Syme, D., Ballingall, Leslie
 1949 Telford, Richard, Lathallan Home Farm, Colinsburgh
 1949 Telford, Mrs Richard, Lathallan Home Farm, Colinsburgh
 1948 Thomson, Commander A. E., R.N., Craigsanguhar, Cupar
 1949 Thomson, William, Hilton of Kelty, Kelty
 1948 Waddell, Robin, Dales Farm, Dunfermline
 1949 Walker, W. D., Kilrie, Kirkcaldy
 1949 Wallace, Miss Dorothy, Peacehill, Wormit
 1949 Wallace, Mrs Jane, Peacehill, Wormit
 1948 Webster, David, Grassimston, Crail
 1949 Weir, James C., Balgove, St Andrews
 1948 Whiteford, Robin, Wester Kilmany, Cupar
 1949 Wilson, Andrew, Carvenom, Anstruther
 1949 Wilson, James M., of Gordonshall, Pittenweem

Admitted
1949 Wilson, William, National Bank
Buildings, Cupar
1949 Young, James, Banbeath, Leven

KINROSS

1949 Adam, Mrs Barbara Eunice, Blair-
adam, Kelty (Kinross District)
1949 Adam, Captain Charles Keith, Blair-
adam, Kelty (Kinross District)
1948 Alexander, W. D., Hilton, Milnathort
1948 Beatson, John, Brunthill, Kinross
1948 Beatson, Robert N., Brunthill, Kin-
ross
1949 Beveridge, John, Gairneybridge, Kin-
ross
1949 Black, Mrs W. B., Holton, Milnathort
1949 Braid, Arthur, Channel Farm, Milna-
thort
1949 Campbell, J. A., Bankhead, Fossoway,
Rumbling Bridge
1949 Crawford, A. D., Frux, Kinross
1949 Cunningham, D., Bacon Factory,
Milnathort
1949 Cunningham, William, Bacon Fac-
tory, Milnathort
1949 Fyfe, J. P., The Pow, Fossoway,
Kinross-shire
1949 Fyfe, Mrs, The Pow, Fossoway,
Kinross-shire
1949 Goodall, Mrs H. P., Cairnfold, Dollar
(Kinross District)
1949 Hamilton, J., Blairnathort, Milna-
thort
1949 Kay, R., Blacksmith, Stirling Road,
Milnathort
1949 Keay, I., Touchie, Milnathort
1949 Kidd, J., Hilton of Aldie, Fossoway,
Kinross-shire
1948 Leadbetter, James C., Newlands,
Milnathort
1949 Leiper, D., Netherhall, Milnathort
1949 Leiper, William, Netherhall, Milna-
thort
1949 Macaulay, James, Ardgairney, Kin-
ross
1949 M'Ewan, D., Lynnwood, Kinross
1949 M'Ewan, Hugh G., Lochend Farm,
Kinross
1949 Melrose, N., Frux, Kinross
1949 Nelson, William, Lochburn, Kinross
1949 Nimmo, John, Kilduff, Kinross
1948 Reid, Hugh Andrew, Middleton,
Milnathort
1948 Reid, Thomas Huie, Middleton,
Milnathort
1949 Riddell, W. K., 32 Montgomery
Street, Kinross
1949 Scott, James I., Orwell Park, Milna-
thort
1949 Somerville, R., Orwell, Milnathort
1949 Stewart, R., Pittendreich, Milnathort
1949 Suttie, Angus, Hartfell, Kinross
1949 Young, Mrs Marie Veronica Dunlop,
Mawcarse, Milnathort, Kinross-shire

PERTH

(PERTH SHOW DISTRICT)

1948 Angus, David, Balgour, Dunning
1948 Angus, George, Binzean, Forgan-
denny
1949 Atkinson-Clark, W. H., Ashintully
Castle, Kirkmichael
1949 Ballingall, George, Parkfield, Perth
1949 Baxter, William Henderson, Green-
bank, Bridge of Earn

Admitted
1949 Bennie, Robert D., Solzarie, Blair-
gowrie
1948 Bong, David K., 21 Rossie Place,
Auchterarder
1948 Bowman, Charles D., 2 Balvalrd
Place, Perth
1949 Brockett, G. F., c/o L.O. Tractors,
Ltd., Coupar-Angus
1949 Brough, Mrs Elsie, East Jordanstone,
Alyth
1948 Brown, James Macneil, Grange of
Elcho, Perth
1948 Bryan, James Douglas, Culthill Im-
plement Works, Murthly
1948 Bryden, Andrew T., New Mains,
Scone
1949 Buchanan, William, Forehill, Murthly
1948 Cameron, James, Drumharvie, Mad-
derty
1949 Cameron, Peter, Monzie, Blair Atholl
1949 Cameron, Stewart, Milton of Black-
lunans, Blairgowrie
1949 Campbell, Mrs Charles P., Secretary,
Perth Branch N.F.U., St John
Street, Perth
1948 Clark, Alexander, Invermay, Forgan-
denny
1949 Clark, Miss Jessie, Muirtons, Perth
1949 Clark, Mrs Thomas, Muirtons, Perth
1949 Constable, David, Springfield Farm,
Burreilton
1949 Cox, Ronald B., Hillhead, Dunkeld
1948 Cree, Norman, 3 Queen's Avenue,
Craigie, Perth
1949 Crow, J. R. (John Harper & Sons
(Blairgowrie), Ltd.), Blairgowrie
1948 Dalglish, Ronald W., East Third,
Auchterarder
1949 Darling, John, F.R.I.C.S., Secretary,
The Abercairney Estates Ltd.,
18 Charlotte Street, Perth
1949 De Sales La Terriere, Major J. F.,
Ballinloan, Pitlochry
1949 Dewar, David Ian (Blairgowrie Grain
Mills Ltd.), Erich Mill, Blairgowrie
1948 Dewhurst, Lieut.-Colonel H. L.,
Dungarthill, Dunkeld
1948 Dewhurst, The Hon. Mrs, Dungart-
hill, Dunkeld
1949 Dickie, Bruce Watson, Whitehills,
Inchture
1949 Drummond-Hay, Major James, of
Seggieden, by Perth
1949 Duncan, Captain James A. L.,
Jordanstone, Meigle
1948 Duncan, Mrs Christian, of Balhormals,
Aberfeldy
1948 Duncan, John, M.R.C.V.S., c/o Messrs
Brown & Weir, 32 York Place,
Perth
1949 Dunlop, Matthew, Knollhead, Coupar-
Angus
1949 Dunphie, Colonel Peter, C.B.E., Clo-
quhat, Bridge of Cally
1949 Dunphie, Mrs Peter, Cloquhat, Bridge
of Cally
1948 Ewan, Albert Young, Jackston, Bank-
foot
1948 Ewing, John, 2 Spens Crescent, Jean-
field, Perth
1949 Flashie, Robert, Pleasance, Coupar-
Angus
1949 Fleming, Harry A., The Grange,
Meigle
1949 Fleming, Mrs, The Grange, Meigle
1949 Fleming, James C., Aberbothrie,
Alyth
1948 Fordyce, James, Abbey Hill, Auchter-
arder
1948 FORTEVIOT, Lord, of Dupplin, Perth
1949 Fraser, J. L. (Frew & Co. Ltd.),
14 Princes Street, Perth
1949 Galloway, Mrs Jessie T., Vinebank,
Kinnoull, Perth

Admitted

1949 Gillespie, Lindsay B., Glenlea, 73
Perth Road, Scone
1948 Gilles, Ronald, East Inchmichael
Farm, Errol
1949 Gloag, Matthew Frederick, Bonhard,
by Perth
1949 Grant, John, Simprim, by Meigle
1948 Grant, William Leslie, Solicitor,
8 Kinnoull Street, Perth
1948 Gray, John C., West Park, Auchter-
arder
1948 Gray, Peter, Snalgow, Murthly
1948 Harper, James (John Harper & Sons),
Perth Road, Blairgowrie
1949 Harper, William B., Grangemount,
Alyth
1949 Henderson, J. T., Solicitor, Royal
Bank Buildings, Perth
1949 Henderson, Major P. H., D.F.C.,
Lawton, Coupar Angus
1949 Hope, Ian, Bogmilm, Inchture
1948 Howie, David H. B., Ardgath,
Glencarse
1949 Howie, Angus Macpherson, Mill
House, Dunning
1949 Howison, Mrs E. C., Rannagulzion,
Blairgowrie
1948 Jackson, Kenneth Greer, Wester
Campale, Glenalmond
1949 Leitch, A. Candy, Glenfarg
1948 Livingston, James F., Mains of Car-
gill, Melkleur
1949 Lyburn, J. U., Mains of Cammo, Meigle
1949 Lyburn, William D., Gask, Coupar-
Angus
1949 Lyle, Captain A. M., Rlemore, Dun-
keld
1949 M'Caw, Iain R., Watterybutts, Errol
1949 Macdonald, William S., Gormack,
Blairgowrie
1949 M'Inroy, William, Baldinies, Dun-
ning
1948 Mackay, Donald, Solicitor, 8 Kinnoull
Street, Perth
1949 Mackenzie, Ian, Earnvale, Bridge of
Earn
1948 M'Laren, George, Bankhead of Kin-
loch, Meigle
1948 M'Laren, Peter Chalmers, Bankhead
of Kinloch, Meigle
1948 M'Laren, William, Bankhead of Kin-
loch, Meigle
1949 M'Lean, Roy A., Isalapark, Coupar-
Angus
1948 M'Leish, John, 64 Scott Street, Perth
1948 M'Naughton, Donald, Dullator,
Strathbraan, Dunkeld
1948 M'Naughton, Finlay, Dullator,
Strathbraan, Dunkeld
1948 M'Nicol, Archibald Hunter, Stepps of
Cally, Blairgowrie
1948 Macrae, Robert R., M.R.C.V.S., 18
York Place, Perth
1948 Main, Mrs Margaret S., Windyedge,
Perth
1948 Main, Miss Marian June Johnstone,
N.D.A., N.D.D., Windyedge, Perth
1948 Main, Ramsay M., Balgarthno, Inch-
ture
1949 Maitland, Richard Ogilvy Heriot,
Errol Park, Errol
1949 MANSFIELD, The Countess of, Logie
House, Methven
1949 Marindin, Miss Evelyn, Fordell, Glen-
farg
1949 Millar, Alastair Duncan, A.M.Inst.C.E.,
M.C., Remony, Aberfeldy
1949 Millar, Mrs A. Duncan, Remony,
Aberfeldy
1949 Miller, James, Drumharrow, Luncarty
1949 Miller, Mrs James, Drumharrow, Lun-
carty
1948 Miller, John, North Kinkell, Auchter-
arder

Admitted

1948 Miller, William, Lowbank, Auchter-
arder
1948 Miller, Mrs William, Lowbank,
Auchterarder
1949 Mitchell, James Marshall, Bruceton,
Alyth
1949 Mitchell, Robert, Bleaton, Blair-
gowrie
1949 MONCREIFFE of that Ilk, Sir David,
Moncreiffe, Bridge of Earn
1949 Moncreiffe, Captain Iain, of Easter
Moncreiffe, Bridge of Earn
1949 Morris, Robert G., Balgersho, Coupar-
Angus
1949 Nairn, Alfred Martin, of Lassin-
tullich, Kinloch Rannoch
1949 Niven, Mrs Annie, Denmarkfield,
Perth
1948 NORIE-MILLER, Sir Stanley, Bt., M.C.,
J.P., Murrayshall, near Perth
1949 Prain, Andrew, Manorbank, Blair-
gowrie
1949 Rae, Donald J., "Linmore," High-
field Road, Scone
1949 Rattray, Mrs Clerk, Easter Drimnie,
Blairgowrie
1948 Rattray, David Guild, Broom, Auch-
terarder
1948 Rattray, Richard, Broom, Auchter-
arder
1948 Rattray, William Sinclair, Broom,
Auchterarder
1949 Ritchie, Alexander T., jun., Littleton,
Inchture
1948 Ritchie, William James, Mains of
Huntingtower, Perth
1949 Ritchie, William, Littleton, Inch-
ture
1949 ROBERTS, Lady, Strathallan Castle,
Auchterarder
1949 Robertson, Gilbert Muir, East of
Scotland College of Agriculture,
Rose Terrace, Perth
1948 Rutherford, Mrs M. L., Baldowrie,
Coupar Angus
1949 Saddler, Joseph M., Quiech, Alyth
1949 Savers, Mrs C. S., 103 Glasgow Road,
Perth
1949 Savers, Councillor Robert, 103 Glas-
gow Road, Perth
1948 Scott, Donald Mitchell, Millhaugh,
Dunning
1948 Scott, James Crawford, Millhaugh,
Dunning
1948 Scott, William Matthew, sen., Mill-
haugh, Dunning
1948 Scott, William, jun., Millhaugh,
Dunning
1948 Shaw, William, Easter Cleavage,
Dunning
1949 Smith, John, Hole-o'-Clean, Glencarse
1948 Smith, Rennie Watson, National
Bank Buildings, 16 South Methven
Street, Perth
1949 Stewart, Ian, Maryfield, Blairgowrie
1949 Stewart, Patrick C., Millhills, Inch-
ture
1948 Stirrat, Alexander Gleig, Elcho,
Perth
1948 Stirling, William R., Gellybanks,
Stanley
1949 Strachan, John, West Pilmore, Inver-
gowrie
1949 Strachan, Robert, West Pilmore,
Invergowrie
1948 Strang, Thomas, Ardgarg Mains,
Forgandenny
1949 Tanner, William A., Mount Stewart,
Bridge of Earn
1949 Thomas, David B., Dainabreck,
Blairgowrie
1948 Thomson, Alexander Stuart, B.Sc.,
Auchraw of Malier, Craigend, by
Perth

Admitted

- 1949 Thomson, H. Graeme, Netherton of Balhary, by Alyth
 1949 Thomson, Mrs H. Graeme, Netherton of Balhary, by Alyth
 1949 Tosh, Alfred, Lochton Farm, Abernyte
 1949 Tosh, Mrs, Lochton Farm, Abernyte
 1949 Turnbull, Mrs A. R., East Camno, Meigle
 1949 West, Ian George, East of Scotland College of Agriculture, Rose Terrace, Perth
 1948 White, Maurice William Gavin, c/o Strang, Jesmond, Bridge of Earn

Admitted

- 1949 White, Robert Alexander, Innernytie Farm, Stanley
 1949 Wingate, George E., Longleys Farm, Meigle
 1949 Wingate, Miss M., Longleys Farm, Meigle
 1948 Young, Andrew W., Balgay, Inchture
 1948 Young, James W., Balgay, Inchture
 1949 Young, John, Bogles, Alyth
 1949 Young, Mrs R. S., Friarton, St Martin's, Balbeggie
 1948 Young, T. J. Robertson, Newbigging, Methven

3.—STIRLING DIVISION

CLACKMANNAN

- 1948 Cook, James, 143 High Street, Tillcultray
 1949 Goodall, David Alexander, Broom Farm, Blairingone, by Dollar
 1949 Grant, James Stanley, "The Firs," Clackmannan
 1948 Grant, Ronald A. R., 21 Alexandra Drive, Alloa
 1948 Izat, Sir J. Rennie, of Balllilesk, Balllilesk, Muckhart, by Dollar
 1949 M'Hattie, James, Farms Manager, Ditch Farm, Cambus, Clackmannan
 1948 MacLaren, Mrs, The Craigrie, Clackmannan
 1948 Moncrieff, Frank, Inglestie, Grange Road, Alloa
 1949 Prentice, Mrs Alex., Gartenkeir, Tillcultray
 1948 Russell, Archibald, jun., Alloa Inch (Island) Farm, Alloa
 1949 Scobble, David, Devonknowes, Tillcultray
 1949 Stewart, Robert, Arndean, Dollar
 1949 Tullis, J. D. T., c/o Tullibody Land Co., Ditch Farm, Cambus
 1949 Wilson, John, Allaleckle, Dollar

- 1949 Lumsden, Mrs J. A., Bannachra House, by Helensburgh
 1949 MacGregor, Malcolm, Barremman, Roseneath
 1948 M'Laren, James, jun., Agricultural Engineer, Middlemuir Road, Lenzie
 1948 Macnaughtan, J. Gordon, Devon Lodge, Helensburgh
 1949 Mitchell, Mrs E. N., Inchanagh, Cumbernauld Station
 1948 Paterson, Lieut.-Colonel A. H., T.D., The Long Croft, Helensburgh
 1948 Rankin, J. A., "Struan," Balloch
 1948 Taylor, Henry, jun., Kildrum Farm, Cumbernauld
 1949 Taylor, Thomas N., Wester Bannachra Farm, by Helensburgh
 1949 Telfer-Smollett, Major-General A. P. D., of Bonhill, Cameron House, Alexandria
 1948 White, Matthew W. B., Penrose, Bearsden
 1948 Whiteford, W., Ladyton, Bonhill
 1949 Voy, Gilbert, Old Faifey Mills, Hardgate

PERTH

(STIRLING SHOW DISTRICT)

DUMBARTON

- 1948 Alexander, Archibald, Lochvue, Langbank, Milngavie
 1949 Brewster, Robert, Gooseholm Farm, Dumbarton
 1948 Campbell, John Scotland, Benreech House, Arrochar
 1949 COLQUHOUN, Sir Ivar I., Bt., of Luss, Rosadhu, Luss
 1948 Crawford, R., High Mains, Dumbarton
 1949 Filshie, James D., Dumbuck Farm, Bowling
 1949 Filshie, William R., Mains of Cardross, Dumbarton
 1948 Graham, Admiral A. Cunninghamame, of Ardoch, Cardross
 1948 Graham, Mrs P. Cunninghamame, Ardoch, Cardross
 1948 Jackson, W., "Woodhead," Kilmardenny Avenue, Bearsden
 1949 Laird, William, Glenview Pig Farm, Duntocher
 1948 Lennox, E., Shemore, Luss
 1948 Lumsden, G. R. C., Arden, Dumbartonshire

- 1948 Aitken, R. W. Braid, Auch, Tyn-drum
 1948 Andrew, James C., c/o A. & J. Scoular, Thornhill
 1948 Bain, John B., Glenisla, Doune
 1948 Bell, James, East Brae, Doune
 1949 Blackwood, J. R. A., B.Sc., N.D.D., Armadale House, Braco
 1949 Burn-Murdoch, Lieut.-Colonel Ian, O.B.E., Gardincaber, Doune
 1948 Cameron, Donald, The Torrance, Dunblane
 1949 Cameron, John Campbell, Stockbridge Farm, Dunblane
 1948 Clark, David, M.M., Forester, Feddal, Braco
 1948 Coutts, Mrs Joyce Creena, Dalpatrick, Crieff
 1948 Craig, Miss Agnes Gemmell, Gwydyr, Crieff
 1949 Darroch, Colonel Duncan, of Gourock, Coldon, Port-of-Menteith
 1948 Dixon, Miss Elizabeth Ann, Ledcameroch, Dunblane
 1949 Dods, Mrs Isobel M., "Finlarig," Killin
 1948 Dron, Donald Andrew, Crieffvechter, Crieff

Admitted

- 1948 Dron, William Douglas Duff, Crieff-
vechter, Crieff
1949 Forrester, A. J., Dun Dhu, Aberfoyle
1949 Forrester, R. D., Dun Dhu, Aber-
foyle
1949 Graham, A. Maxtone, Cultoquhey,
Crieff
1949 Hyde, Lieut.-Colonel Roger G.,
Braes of Greenock Farm, Callander
1948 M'Ara, David, Main Street, Thorn-
hill
1949 MacDiarmid, Ian, East Bracklinn,
Callander
1949 M'Laren, David Peter, Concralg,
Crieff
1949 M'Naughton, Robert, Farm Manager,
Rhuveag, Balquhiddier
1948 MacTaggart, David B., Dunard, Killin
1948 Maller, John, Castle Farm, Doune
1948 Maller, John, jun., Castle Farm,
Doune
1949 Miller, Mrs J. R., Violet Bank,
Doune
1948 Moulson, Ronald W., c/o A. & J.
Scouler, Thornhill
1948 Munro, Hugh, Principal, Lawers
School of Agriculture, Lawers,
Comrie
1949 Penny, J. G., Sauchie Poultry Farm,
Crieff
1948 Sandison, Lieut.-Colonel W., Drulm
an Tavore, Ochertyre, Crieff
1948 Scott, Alexander, c/o A. & J. Scouler,
Thornhill
1949 Souter, Archibald, Farm Manager,
Ladyston Farm, by Muthill
1949 Stewart, Mrs A. M., Tighness, Tyn-
drum
1948 Stroyan, Ronald S., Boreland, Killin
1948 Waddell, John, Alichmore, Crieff
1949 White, James John, Kirkton, Doune

STIRLING

- 1948 Anderson, Kenneth P., B.Sc.,
M.R.O.V.S. 58 Causewayhead
Road, Stirling
1949 Bain, William, The Mains, Gargun-
nock
1948 Bell, George, Westfield Farm, Airth,
Falkirk
1948 Bell, George, jun., Westfield Farm,
Airth, Falkirk
1949 Binnie, Alexander S., Bowhouse
Farm, Grangemouth
1948 Binnie, David, Middle Barnego,
Denny
1948 Cameron, Ewen C., Spittalhill, Fintry,
by Glasgow
1949 Carrick, Charles W., Woodyett, Gar-
gunnock
1949 Collins, Miss K. Rosemary, Rowar-
dennan Lodge, Loch Lomond, by
Glasgow
1949 Craig, T. W., B.Sc., c/o Department
of Agriculture for Scotland, 75
Murray Place, Stirling
1949 Dalton, R. W., Rowan House, Bom-
bay Flats, Bridge of Allan
1949 Davidson, A. J., 4 Sauchenford,
Bannockburn
1949 Davidson, Henry, 4 Sauchenford,
Bannockburn
1949 Davidson, Henry K., 4 Sauchenford,
Bannockburn
1949 Edwards, A., B.Sc., "Firbank,"
Kippen, Stirlingshire
1949 Fisher, Mrs Donald M., Ballamenoch,
Buchlyvie

Admitted

- 1949 Gardner, D. D., 2 Drummond Place,
Stirling
1948 Haddow, Robert, Tombrake, Balforn
1948 Hendry, William T., Back o' Muir
Farm, Bannockburn, by Stirling
1949 Jessiman, Alexander H., Waverley,
Balforn
1948 Kinross, William C., 2 Dumbarton
Road, Stirling
1948 Laurie, Richard (Alex. Laurie &
Sons), 3 Mansion House Road,
Camelon, Falkirk
1948 Lindsay, James W., Namanga, Cam-
busbarron, by Stirling
1949 Logan, Archie K., Powis Mains,
Stirling
1949 Logan, James K., Powis Mains,
Stirling
1948 M'Ewan, James, The Lurg, Fintry,
by Glasgow
1948 MacEwen, Daniel, jun., 5 Melville
Terrace, Stirling
1948 MacEwen, Ian, 24 Snowdon Place,
Stirling
1948 M'Rae, John, 16 Orchard Street,
Falkirk
1949 Muirland, John Walter, Union Bank
of Scotland, Bridge of Allan
1948 Millar, James Forrester, Craigton
Farm, Fintry, by Glasgow
1948 Mitchell, John, Spittal Farm, Kil-
learn
1949 Monfries, Hector, Greenwells Farm,
Polmont
1948 Muirhead, John, Solicitor, Corn Ex-
change Road, Stirling
1948 Muirhead, R. Ian, 1 M'Laren Terrace,
St Ninlans, Stirling
1948 Orr, E. Rowley, Lednabra, Balforn
1948 Oswald, John, North Field, Denny
1949 Pankhurst, Mrs Georgeina, Shrigarton
Farm, Kippen, by Stirling
1949 Paterson, John, Powblack, Kippen
Station
1949 Raines, Mrs T. H., Dalveen, Birkhill
Road, Stirling
1949 Reid, Robert, Netherwood Farm,
Castlecary
1948 Robertson, John Alexander, 1 Allan
Park, Stirling
1949 Sands, Alex., 5 Pitt Terrace, Stir-
ling
1949 Seaward, Mrs J. Agnes, Touchmollar,
Cambusbarron
1949 Seaward, Richard D., Touchmollar,
Cambusbarron
1948 Sharpe, Charles S., 21 Murray Place,
Stirling
1948 Stewart, David M., Brunsfield,
Bridge of Allan
1949 Stewart, William, Bank of Scotland,
Stirling
1948 Stirling, John, Burnbank Farm, by
Stirling
1949 Strang, James, Fencing Contractor,
Polmont
1948 Walker, Hugh, Haircraigs Farm,
Denny
1948 Walker, Mrs Hugh, Haircraigs Farm,
Denny
1948 Walker, John, Haircraigs Farm,
Denny
1948 Walker, Michael Henry, 2 M'Laren
Terrace, St Ninlans, Stirling
1949 Walls, Archibald D. H., 6 Park
Terrace, Stirling
1949 Walls, Robert, 6 Park Terrace,
Stirling
1949 Walls, William, 6 Park Terrace,
Stirling
1948 Warnock, Norman James Pollock,
"Achnagowan," Killearn
1949 Wilson, Mrs William, Glencorse,
Killearn

4.—EDINBURGH DIVISION

EAST LOTHIAN

- Admitted
 1948 Baxter, Thomas, Templehall, Ormiston
 1948 Baxter, W., Templehall, Ormiston
 1949 Bruce, John B., Seton Mains, Longniddry
 1948 Dawson, William Hume Maxwell, Whitelaw, Haddington
 1949 Dudgeon, Mrs Jean M., Sunnyside, Vetch Park, Haddington
 1949 Elder, John Irvine, jun., c/o Messrs Thomas Sherriff & Co., Ltd., West Barns, Dunbar
 1948 Gardner, James, Westfield, Haddington
 1948 Gardner, William, Westfield, Haddington
 1949 Halliday, T. (International Harvester Company), Gladsmuir
 1949 HAMILTON, The Duke of, P.C., G.C.V.O., A.F.C., Lennoxloche, Haddington
 1949 Hendrie, Andrew, Mansefield, Haddington
 1948 Hunter, James (Hunter Brothers), North Berwick
 1949 Kynoch, Mrs J. G., Beechworth, Longniddry
 1948 Lambert, Mrs Charles D., Newmains, North Berwick
 1948 Lambert, Miss Isobel, Newmains, North Berwick
 1948 Logan, Malcolm, Athelstaneford Mains, Drem
 1948 Logan, William Murdoch, Athelstaneford Mains, Drem
 1949 Lowrie, Mrs B. W., Blegbie, Humble
 1948 Lowrie, George Turnbull, Blegbie, Humble
 1948 Lowrie, John, Blegbie, Humble
 1949 Ovens, Meyrick Adam, Linksfield, Aberlady
 1948 Paterson, William (Paterson & Sons, Ltd.), Haddington
 1948 Roberts, G. T., Humble Mill, Humble
 1949 Spence, Charles George, Pitco., Dunbar
 1948 Steven, Alan, Kirklands, Haddington
 1948 Steven, John, Begbie, Haddington
 1949 Strang, F. R., Redashill, Gifford

MID-LOTHIAN

- 1949 Adamson, James, 43 Bingham Terrace, Portobello
 1948 Allison, Robert, Norton Mains, Newbridge
 1949 Baillie, J. C. N., 10 Darnaway Street, Edinburgh 3
 1949 Barr, Mrs Robert, Upper Dalhousie, Bonnyrigg
 1949 Baxter, William R., Gogar Farm, Corstorphine
 1949 Beattie, Fred (Joseph Lucas Ltd.), 3 West Cairstane Road, Edinburgh
 1949 Bonthron, D. H. G. (Haldane & Co.), 19 Atholl Crescent, Edinburgh
 1949 Cheyne, George Duguid, 32 Rutland Square, Edinburgh 1
 1948 Coyle, Robert M., 39 Palmerston Place, Edinburgh 12

- Admitted
 1948 Cruickshank, George A. (Scottish Agricultural Industries, Ltd.), 35 Charlotte Street, Leith
 1948 Cunningham, James, Edinburgh and East of Scotland College of Agriculture (Bee-keeping Department), Nether Liberton, Edinburgh 9
 1948 Cuthbertson, Ranald Ker, 25 Melville Street, Edinburgh
 1948 Dick, Mrs H., Greenaway, Kinnear Road, Edinburgh
 1948 Dick, James, Langton Farm, Mid-Caldor
 1949 Doig, Leonard George, 41 Warriston Avenue, Edinburgh, 4
 1949 Drysdale, Robert T., 139 Bruntsfield Place, Edinburgh 10
 1949 Edminson, Derek F., Scottish Rural Gas, Ltd., 11 Stafford Street, Edinburgh
 1948 Elliot, W. I. Douglas, Middleton, Stow
 1949 Fairgrieve, George Spence, Cockholm Works, Stow
 1949 Fenton, W. D. D., 20 Nelson Street, Edinburgh 3
 1949 Ferguson, George D., 76 Warrender Park Road, Edinburgh, 9
 1949 Firn, Roland J., 21A Ainslie Place, Edinburgh
 1949 Fleming, Ian J., 8 Lauriston Place, Edinburgh
 1949 Forbes, Alistair, 34 Mansionhouse Road, Edinburgh
 1949 Forbes, John, 142 East Trinity Road, Edinburgh
 1948 Franklin, Thomas Bedford, M.A., F.R.S.E., 16 Learmonth Place, Edinburgh 4
 1949 Freckleton, William C. N., 93 Harrison Road, Edinburgh
 1949 Glen, A., M.C., Department of Agriculture for Scotland, St Andrew's House, Edinburgh, 1
 1948 Hill, Thomas G., Currievale, Currie
 1949 Holmes, T. B., Filmuir, Balerno
 1949 Hunter, John, Drylaw Mains, Davidson's Mains
 1949 Innes, John Macdonald, 18 Charlotte Square, Edinburgh
 1949 Keddie, George C. (Mutter, Howey & Co., Ltd.), 24 Market Street, Edinburgh
 1948 Kerr, Mrs H. R., 61 Lockharton Avenue, Edinburgh 11
 1948 King, Godfrey G., c/o Henderson, 27 Howe Street, Edinburgh
 1949 Laing, Mrs A. M., The Tower, Murrayfield Road, Edinburgh
 1948 Lambie, Andrew, Pomathorn Farm, Penicuik
 1948 Lambie, Robert, Auchendinny Mains, Penicuik
 1948 Larnach, Mrs Annie A. S., Oswie, Musselburgh
 1949 Lemmon, Mrs N. J., c/o Secretary, 8 Eglinton Crescent, Edinburgh, 12
 1949 Lemmon, R. M., B.L., Secretary, The Royal Highland and Agricultural Society of Scotland, 8 Eglinton Crescent, Edinburgh 12
 1949 Levie, Norman C., 20 Falcon Avenue, Edinburgh
 1948 Macdonald, John, Broomfield, Corstorphine, Edinburgh 12
 1948 McDonald, T. P., K.C., 68 Northumberland Street, Edinburgh 3

Admitted

- 1949 Mackenzie, Ian (Mackenzie & Moncur Ltd.), Muirhouse, Juniper Green
 1948 MacKinnon, Donald F., 39 Craigleith Hill Avenue, Edinburgh 4
 1949 McLeod, John Hume, 18 Charlotte Square, Edinburgh
 1948 MacLeod, Miss M. M., Department of Agriculture for Scotland, 15 Grosvenor Street, Edinburgh
 1948 McNeill, John (Vigzol Oil Refining Co.), 5 Oswald Road, Edinburgh 9
 1948 McNicol, A. M., Hilltown Farm, Portobello
 1949 McNicol, Mrs Marion F., Hilltown, Portobello
 1949 Manclark, Norman, Inverleith Place, Edinburgh
 1949 Manclark, Mrs Norman, Inverleith Place, Edinburgh
 1948 Menzies, Charles C., Hanover Buildings, Rose Street, Edinburgh
 1948 Miller, Richard H. B., Letham Farm House, Mid-Calder
 1948 Miller, Mrs R. H. B., Letham Farm House, Mid-Calder
 1948 Mitchell, Thomas, Coates Farm, Penicuik
 1949 More, Mrs Allison Young, N.D.D., The Dene, Park Road, Eskbank
 1948 Moyes, Eric A., B.Sc. (Agric.), 60 East Claremont Street, Edinburgh
 1949 Muir, J. H., Freeland, Newbridge
 1948 Murray, David, C.A., 1 Cambridge Street, Edinburgh
 1948 Murray, Mrs Jenny D., 1 Cambridge Street, Edinburgh
 1948 Nisbet, R. G. C., M.B.E., Department of Agriculture for Scotland, St Andrew's House, Edinburgh 1
 1948 Noble, Michael Allister, "Westermount," 11 Craighill Gardens, Edinburgh 10
 1949 Ogilvie, David S., c/o Murie, 20 Oxford Street, Edinburgh, 8
 1948 Price, Major I. V. M. (Retd.), New Club, Edinburgh
 1948 Ross, George Alex., 37 Craigcrook Avenue, Edinburgh
 1948 Russell, Thomas W., 21 Dudley Gardens, Edinburgh 6
 1949 Salmon, Robert A. (Plant Protection Products), 34 Dovecot Road, Edinburgh 12
 1948 Shering, George, 122 West Granton Road, Edinburgh
 1948 Smith, Charles, Inchview, 70 West Granton Road, Edinburgh
 1948 Smith, Miss J. R., 165 Dalkeith Road, Edinburgh
 1948 Smith, Peter, West Mains, West Calder
 1949 Somerville, Mrs Alexandra Millicent, Firbank, Heriot
 1949 Somerville, Hugh C., Firbank, Heriot
 1949 Stewart, Douglas Carr, 1 Hillpark Grove, Edinburgh, 4
 1948 Stewart, Ewen, B.Sc., 16 Polwarth Terrace, Edinburgh
 1948 Sutherland, C. D., Symington, Stow
 1948 Sutherland, Mrs M., Symington, Stow

Admitted

- 1948 Tatton, E. Roy (Henry Tatton & Son), 30 Rose Street, Edinburgh 2
 1948 Thomson, James (Farmers' Supply Association), 191 Morningside Road, Edinburgh 10
 1948 Thorburn, A., 105 West Port, Edinburgh
 1948 Traynor, Miss Elsie, Scottish Association of Young Farmers' Clubs, 11 Rutland Street, Edinburgh
 1948 Tulloch, J. (Scottish Agricultural Industries, Ltd.), 39 Palmerston Place, Edinburgh 12
 1948 Turnbull, W. R., 5 Park Road, Juniper Green
 1948 Urquhart, Robert J., 'Scotsman' Office, North Bridge, Edinburgh
 1949 Walker, Mrs Gladstone, Mountskip and Hagbrae, Gorebridge
 1948 Walker, William J., Crofthead, Mid-Calder
 1949 Warren, Eric Charles, 18 Charlotte Square, Edinburgh
 1949 Watson, Richard Noble, 67 Cluny Gardens, Edinburgh
 1949 Weir, Donald S., 5 Royal Circus, Edinburgh
 1949 Weller, Henry Victor, 'Scottish Daily Mail,' Tanfield, Edinburgh, 4
 1949 West, W. J. (Scottish Agricultural Machinery Testing Station), Howden House, Midcalder
 1949 Wilson, Robert, Culken Farm, Penicuik
 1949 Wiseman, W. M., 79 Findlay Gardens, Edinburgh, 7

WEST LoTHIAN

- 1948 Aitken, John, Highfield, Linlithgow
 1948 Alcorn, William, Hall Torbane, Bathgate
 1948 Allison, William N., Almond Hill, Kirkliston
 1948 Braes, Robert, Burnshot, Linlithgow
 1948 Brebner, Mrs Isabella, The Leuchold, Dalmeny House, Edinburgh
 1948 Brownlie, Stewart, Illeston Farm, Broxburn
 1948 Bruce, W. R., Joiner and Contractor, Philipstoun, Linlithgow
 1948 Jack, George, Cowhill, Whitburn
 1948 Macdonald, James F., Mannerston, Linlithgow
 1949 McKinnon, Mrs, The Craigs, Linlithgow
 1948 Morrison, J. A. W., Wester Dalmeny, South Queensferry
 1948 Orr, E., Barbauchlaw Mains, Uphall
 1948 Paterson, W., Carriber Mill, Linlithgow
 1948 Taylor, James, Mosshall, Blackburn, Bathgate
 1948 Thomson, James A., Myrehead, Linlithgow
 1948 Tod, James R., Starlaw, Bathgate
 1948 Tomison, Andrew L., Baron's Hill, Linlithgow

5.—ABERDEEN DIVISION

ABERDEEN

- 1949 Adie, Andrew, Blairmore Estate Office, Glass, Huntly
 1949 Alexander, Charles, 49 Rubislaw Den South, Aberdeen

- 1948 Anderson, A., Mains of Overall, Inch
 1949 Anderson, Miss E. J., Department of Agriculture for Scotland, 41½ Union Street, Aberdeen
 1948 Anderson, Mrs William M'R., Brac Farm, Mannofield, Aberdeen

Admitted

- 1948 Annand, J. S., Commercial Bank of Scotland, Ltd., Insh
 1949 Asher, David, Bank House, Lumphanan
 1949 Asher, Mrs Margaret I., Bank House, Lumphanan
 1949 Ballantyne, Mrs Brenda Muriel, Little Fintray, Dyce
 1948 Barclay, Thomas, Grieve, Uppermill, Tarves
 1948 Beaton, Alexander, Braefoot, Turriff
 1949 Bisset, John Mordaunt Murray, Mayen, Rothiemay, Huntly
 1948 Booth, A., The Smithy, Daviot
 1949 Booth, Mrs Annie, Northfield Farm, Bucksburn
 1949 Booth, John, Walton, Bucksburn
 1949 Brown, Alfred, Department of Agriculture for Scotland, 6 Queen's Gardens, Aberdeen
 1949 Bruce, Miss Priscilla C., Logierievc, Udry
 1949 Bryce, Alexander Reid, Department of Agriculture for Scotland, 6 Queen's Gardens, Aberdeen
 1948 Cameron, Miss F. H. D., "Hawthorn," Mintlaw
 1949 Cameron, Miss Margaret C., N.D.P., c/o British Oil and Cake Mills, Ltd., 211 Union Street, Aberdeen
 1949 Challoner, P. A., M.I.Mech.E., Whitehaugh, Alford
 1949 Challoner, Mrs W., Whitehaugh, Alford
 1948 Chalmers, Albert, Uppermain, Echt
 1949 Clark, Henry, 30 Woodlands Crescent, Turriff
 1948 Clark, John B., West Harlaw, Inverurie
 1949 Clark, Mrs M., 30 Woodlands Crescent, Turriff
 1948 Coghill, George, Monkshill, Udry
 1948 Collie, George, Bruntstone, Oldmeldrum
 1948 Cooper, Douglas R., Dunnydeer House, Insh
 1948 Copeman, Graeme J. F., 4 Devanha Gardens West, Aberdeen
 1948 Cruickshank, David, Whiterashes, Turriff
 1949 Cumming, Mrs Mary, Drums, Foveran, Newburgh, Aberdeenshire
 1949 Cumming, William, Drums, Foveran, Newburgh
 1949 Cuthbertson, D. P., M.D., D.Sc., F.R.S.E., The Rowett Research Institute, Bucksburn
 1948 Dawson, Joe, Balgove, Oldmeldrum
 1949 Duguid, John (Mitchell & Rae Ltd.), Newburgh
 1948 Durno, George M., Brankanentum, Insh
 1949 Ewen, George, Kintore Arms Hotel, Kintore
 1949 Farquhar, D., 44 High Street, Turriff
 1948 Farquhar, John Alec, Marchlands, Lomay
 1948 Ferries, Peter, Cairnbeathie, Lumphanan
 1948 Forbes, Charles, Miltown of Dumbreck, Udry
 1948 Fowler, Mrs Jane F., Chairman, Northern Co-operative Society, Ltd., 54 Loch Street, Aberdeen
 1948 Fowle, H. A., 2 Station Road, Kennethmont
 1948 Fraser, H., Smithy Croft, Newton, Insh
 1948 Gauld, S., Upper Canada, Premnay, Insh
 1949 Geddes, John, Department of Agriculture for Scotland, 6 Queen's Gardens, Aberdeen

Admitted

- 1948 Gill, James C., 5 Belvidere Street, Aberdeen
 1949 Gordon, David, Department of Agriculture for Scotland, 6 Queen's Gardens, Aberdeen
 1948 Grant, Alexander, 28 Donmouth Crescent, Bridge of Don, Aberdeen
 1948 Hamilton, B. H., North of Scotland Bank, Ltd., 3 High Street, Inverurie
 1949 Harvey, David, Pitgersie, Foveran
 1949 Harvey, Ronald, Pitgersie, Foveran
 1948 Heath, Roland C., Thelma, Collieston, by Ellon
 1948 Henderson, William, Little Ythsie, Tarves
 1948 Heughan, William, Douneside, Tarland
 1948 Hopkirk, John G. C., Mill of Newton, Colpy, Insh
 1948 Hopkirk, William James, Mill of Newton, Colpy, Insh
 1949 Hutchison, Mrs E. A., Drumgarth, Cults
 1948 Ingleby, Mrs John, Invermarkie Lodge, Huntly
 1949 Ingram, James, Old Inn, Insh
 1948 Ironside, Collin, V.S., 5 High Street, Inverurie
 1949 Jackson, J., Belnaglack, Glenbuchat, Alford
 1949 Johnston, James W., B.Sc. (Agric.), Newton-of-Fintray, by Dyce
 1949 Johnston, Mrs Johan, Newton-of-Fintray, by Dyce
 1948 Johnstone, R., Kirkton, Premnay, Insh
 1948 Keith, Ian F., 265 Rosemount Place, Aberdeen
 1949 Kemp, John, 35 Erskine Street, Aberdeen
 1948 King, E. L., 8 King's Cross Road, Aberdeen
 1949 Laing, Frederick G., 8 Rosehill Drive, Aberdeen
 1949 Laing, Mrs F. G., 8 Rosehill Drive, Aberdeen
 1949 Law, Mrs Jenny S., Milton of Learney, Torphins
 1948 Lee, Archibald Maclean, 6 Esslemont Avenue, Aberdeen
 1949 Leith, Mrs Helen, Daystone, Kintore
 1949 Leith, James, Daystone, Kintore
 1949 Lewis, Andrew, M.B.E., B.Sc., Moredun Lodge, Milltimber
 1949 Lewis, Mrs Andrew, Moredun Lodge, Milltimber
 1948 Lyon, Andrew, Chapel of Seggat, Auchterless
 1948 M'Hattie, Mrs G., The Lythe, Tarves
 1949 M'Intosh, Mrs B. D., 16 Gladstone Terrace, Turriff
 1949 M'Intosh, J. S., 16 Gladstone Terrace, Turriff
 1949 Mackie, James Williams, Dunnydeer Farms, Ltd., Insh
 1948 M'Laren, Angus M., c/o Scottish Agricultural Industries, Ltd., Blaikie's Quay, Aberdeen
 1949 M'Robert, J. Leslie, Ashgrove Engineering Works, Aberdeen
 1948 MACROBERT, Lady Rachel Workman, J.P., B.Sc., F.G.S., of Douneside, Tarland
 1948 Mair, John, Kennels, Philorth, Fraserburgh
 1948 Mair, William, Boghead, Cobairdy, Huntly
 1949 Michie, James D., North of Scotland Bank, Ltd., Kintore
 1948 Milne, William, Old Bourtie, Inverurie
 1948 Mitchell, James, Breedies, Alvah, by Turriff

Admitted

- 1949 Mitchell, R. J., Davishill, Udry Station
 1948 Munro, William D., 21-25 Mount-hooly, Aberdeen
 1948 Murray, Harvey Knowles, 23 John Street, Aberdeen
 1948 Murray, W. S. (Allan Brothers), Ashgrove Engineering Works, Aberdeen
 1948 Mutch, Ernest, Grain Merchant, Maud Station
 1949 O'Neill, N. A. R., Home Farm, Leith-Hall, Kennethmont
 1948 Paterson, James S., Boghead, Huntly
 1949 Peterson, Angus Macandrew, Department of Agriculture for Scotland, 6 Queen's Gardens, Aberdeen
 1948 Reith, Mrs Isabella, 3 Queen's Terrace, Aberdeen
 1948 Reith, Mrs John, Kennerty, Peterculter
 1948 Robertson, Alexander, jun., Nether-ton, Inch
 1949 Robson, N. K. (W. Smith & Son, Ltd.), 18 Market Street, Aberdeen
 1948 Rogle, James A., Candacraig Farms, Newe, Strathdon
 1949 Rose, Sydney, White Cairns Hotel, near Aberdeen
 1948 Ross, A. K., Culquoich, Glenkindie
 1948 Ross, Harry, Culquoich, Glenkindie
 1948 Ross, Harry, jun., Upper Towie, Glenkindie
 1949 Ross, William, Department of Agriculture for Scotland, 6 Queen's Gardens, Aberdeen
 1948 Seggie, Ronald J., 17 Union Terrace, Aberdeen
 1948 Shepherd, A., 41½ Union Street, Aberdeen
 1948 Shepherd, J. C., Westhall, Oyne
 1949 Silver, James G., 574 George Street, Aberdeen
 1949 Simpson, Alexander, Greenhaugh, Huntly
 1949 Simpson, R. A. S., 140 South Anderson Drive, Aberdeen
 1949 Simpson, E. D., 140 South Anderson Drive, Aberdeen
 1949 Skea, John, Nether Cantlaw, Milltimber
 1948 Skinner, Charles Roy, Associated British Oil Engines, Ltd., 104 Market Street, Aberdeen
 1948 Skinner, Trentwith L. A., 30 Anderson Drive, Aberdeen
 1948 Smiley, Michael, Castle Fraser, Kemnay
 1949 Smith, Mrs Montgomery, The Hillocks, Bucksburn
 1948 Stephen, William, Balquindochy, Turriff
 1948 Steven, James (The Caledonian Milling Co. (Aberdeen), Ltd.), Caledonian Mills, Aberdeen
 1948 Stevenson, James L., 68 Union Grove, Aberdeen
 1948 Still, A. A. D., Towie Barclay, Turriff
 1948 Strachan, R., South Kirkton, Echt
 1948 Strachan, Roderick, Brucklesseat, Fyvie
 1948 Taylor, David, Broadfield, Bridge of Don, Aberdeen
 1949 Taylor, Frank, Royal Insurance Co. Ltd., 208 Union Street, Aberdeen
 1948 Thomson, Alexander Gordon, 25 Forrest Road, Aberdeen
 1949 Tulloch, Rev. T. A., The Manse, Cluny, Sauchen
 1948 Ward, Harry M., Angus Milling Co., Ltd., Kintore
 1949 Williamson, Arthur (W. Smith & Son, Ltd.), 18 Market Street, Aberdeen

Admitted

- 1948 Wilson, Douglas, Mains of Corsindae, Sauchen
 1948 Wilson, George, South Camaloun, Fyvie
 1949 Wilson, Norman James, 77 Crown Street, Aberdeen
 1948 Yates, Colonel R. J. B., Kildrummy Castle, Mossat

ANGUS

(EASTERN DISTRICT)

- 1949 Abbott, A. I., Newbigging, Montrose
 1949 Adamson, W. J. Campbell, Careston Castle, Careston, Brechin
 1949 Alston, David, Seaton of Usan, Montrose
 1949 Anderson, A., Lower Balmachie, Carnoustie
 1949 Anderson, Lyall Millar, West Bromley of Dun, Montrose
 1949 Anderson, Stanley Alexander, Redcastle, Inverkeilor
 1949 Benvie, Captain D. Mitchell, Heughhead, Frickhelm
 1949 Blyth, Robert, Blacksmith, Maule Street, Monifieth
 1949 Burnett, S. E. S., Berryhill, Arbroath
 1949 Caldwell, John, Grange of Conon, Arbroath
 1949 Colquhoun, Mrs A., Mains of Pannure, by Carnoustie
 1948 Craighead, John, Mains of Edzell, Edzell
 1949 Duncan, Miss Ursula K., Parkhill, Arbroath
 1948 Gardiner, James Fleming, 39 High Street, Montrose
 1949 Garvie, Maxwell R., Hillside, Montrose
 1949 Garvie, Thomas B., Hillside, Montrose
 1949 Goodfellow, David, East Newton, Arbroath
 1949 Graham, H. B., Balcathie, Arbroath
 1949 Grant, S. G., Seafeld, Arbroath
 1949 Guild, Andrew Norrie, Grovesfield Farm, Brechin
 1949 Horsburgh, Norman, Travebank, Carnoustie
 1949 Hutcheon, James, Inchock, Inverkeilor, Arbroath
 1949 Hutcheon, James, jun., Cotton of Inchock, Inverkeilor, Arbroath
 1949 Inglis, Thomas, Powis Farm, Montrose
 1949 Lawson, Alexander, Newton of Boysack, Arbroath
 1949 M'Gill, George, West Haven, Carnoustie
 1949 M'Gill, John, Balmachie, Carnoustie
 1949 Macpherson-Grant, Mrs Evelyn Nancy Stopford, Craigo House, Montrose
 1949 Macpherson-Grant, Ewan George, Craigo House, Montrose
 1949 M'Quistan, R. F., Charleton Home Farm, Montrose
 1949 Mather, James, Maisondieu, Brechin
 1949 Melkie, R., Fallaw, Inverkeilor, by Arbroath
 1949 Millar, Ronald Bruce, Pentland Cottage, Barry
 1949 Murray, Miss Anne, Templewood, Brechin
 1949 Murray, Mrs Douglas, Templewood, Brechin
 1949 Nicoll, R. M., Mainsbank, Arbroath
 1948 Oswald, John K. (John Oswald & Son), Damacre Road, Brechin
 1949 Pattullo, Mrs G. B., Mains of Kelly, Arbroath

Admitted

- 1949 Ramage, William B., 40 Millgate Loan, Arbroath
 1949 Reekie, A. G., Parkconon, Arbroath
 1948 Reid, James, Willowbrae, Balhungle Den, Monifeth
 1949 Rice, W. J., M.R.C.V.S., Golf Lodge, Montrose
 1948 Shanks, F. (Alex. Shanks & Son, Ltd.), 12 Rosemount Road, Arbroath
 1949 Sheriff, Henry, Unthank, Brechin
 1949 Sim, John, Kincraig, Brechin
 1949 Smith, J. M'C., Munross House, by Montrose
 1949 Stewart, M., Blibberhill, Brechin
 1949 Taylor, J. S., Carlogie House, Carnoustie
 1949 Warnock, Hugh, Hawkhill, Lunan, by Arbroath
 1949 Watson, F., Hillkirk, Guthrie
 1949 Watson, Lewis, Balhousie, Carnoustie
 1949 Watson, Robert, sen., Ironshill, Inverkeilor, by Arbroath
 1949 Watson, Robert, jun., Ironshill, Inverkeilor, by Arbroath
 1949 Wilson, James, Leys of Boysack, Arbroath
 1949 Young, James, Cuthlie, Arbroath

BANFF

- 1948 Allan, David W., Bogbain, Keith
 1948 Allan, James F., Stonetown, Mulben
 1948 Brown, John W., Drakemyres, Keith
 1948 Bruce, Murray G., Hill of Chattie, Portsoy
 1948 Bruce, Murray G., jun., Hill of Chattie, Portsoy
 1948 Bruce, Mrs. Hill of Chattie, Portsoy
 1948 Calder, James Petrie, Mains of Findochty, Findochty
 1948 Cowie, John A., Tollo, Turriff (Banffshire)
 1948 Dawson, William, Lochagan, Banff
 1949 Dickson, Mrs. Meta, Sandyhills, Banff
 1948 Duncan, Donald, Fraser, Clochmacreish, Deskford, Cullen
 1948 Findlater, Alexander J., Hillside, Longmanhill, Banff
 1948 Findlater, Mrs. Hillside, Longmanhill, Banff
 1949 Ewing, William, The Mills, Portsoy
 1948 Grant, Alexander P., Crocksmill, Keith
 1948 Grant, John A. S., Hollybank, Mulben
 1948 Grant, John Peter, Glenfarclas, Blackshoat
 1948 Ingram, George B., Greenbog, Cross Roads, Keith
 1948 Ingram, William, Greenbog, Cross Roads, Keith

Admitted

- 1948 Laing, Alexander, Weston House, Keith
 1948 Leslie, George, North Whiteley, Keith
 1949 M'Kenzie, James, Westerside, Buckle
 1949 Metcalfe, William, Fordyce, Portsoy
 1948 Milton, James, Little Forge, Keith
 1949 Morrison, Alexander, Home Farm, Clunie, Aberchirder, by Huntly
 1948 Morrison, John C., West Silverford, Gamrie, Banff
 1949 Murdoch, Andrew, Upper Forge, Keith
 1948 Newlands, James, West Bauda, Findochty
 1948 Shand, Alexander, Muldearie Mains, Keith
 1948 Shepherd, Norman J. B., M.A., LL.B., 40 Low Street, Banff
 1948 Smith, George M., Warylp, Boyndie
 1949 Stewart, John, Mossford, Rothiemay
 1948 Strachan, George K., Easter Jackston, Gamrie, Macduff
 1948 Strachan, W. Nathaniel, Easter Jackston, Gamrie, Macduff

KINCARDINE

- 1948 Argo, John, jun., Harvieston, Stonehaven
 1948 Carr, George D., Lumgair, Stonehaven
 1948 Duguid, James D. D., Myreside, Raemoir, Banchory
 1949 Duncan, Alfred, Woodend, Banchory
 1949 Emslie, William, Threave, Banchory
 1949 Forbes, James A., Slains Park, Kinneff
 1949 Humble, David, Ley, Banchory
 1948 M'Robert, Grant, Solicitor, Commercial Bank Buildings, Stonehaven
 1949 Middleton, Archibald, 6 Martin Terrace, Kinneff, by Inverbervie
 1949 Milne, Robert S. M., Dykelands, Laurencekirk
 1949 Morrice, James Campbell, Easter Beltie House, Glassel
 1949 Neish, Mrs. Annie, Bowbutts Dairy Farm, Strachan, Banchory
 1948 Paterson, Fred, Mains of Balfour, Fettercairn
 1949 Pratt, James, Woodside of Scolty, Strachan, by Banchory
 1948 Reid, A., Mill of Haulkerton, Laurencekirk
 1949 Robertson, David I., Balmakewan, Laurencekirk
 1949 Robertson, William Gordon, Balmakewan, Laurencekirk
 1949 Singleton, Mrs. Jean V. G., Scotston, St Cyrus, by Montrose
 1948 Smith, Robert Cowell, Knappach Banchory

6.—DUMFRIES DIVISION

DUMFRIES

- 1948 Bell, James, Kirkbank, Johnstone-bridge, Lockerbie
 1948 Bell, Robert Lewis, Hangingshaw, Lockerbie
 1948 Callander, G. D. J., c/o Robert Dinwiddle & Co., Ltd., High Street, Dumfries
 1949 Carson, James, jun., Burnfoot of Cluden, Holywood
 1949 Chalmers, J., Summerfield, Dumfries

- 1948 Craig, Robert Struthers, Netherholm, Kirkmahoe
 1948 Crawford, Hugh, Wintersough, Annan
 1949 Crawford, Mrs. Lois C., Dryfeholm, Lockerbie
 1949 Dalziel, Joseph H., Rue, Auldgrith
 1949 Dalziel, R., Heathfield, Auldgrith
 1948 Duff, William Fleming, 80 High Street, Annan
 1948 Elliot, J. K., Waterhead of Dryfe, Boreland, Lockerbie
 1949 Elliot, Walter, Clenries, Sanquhar

Admitted

- 1949 Elliot, Mrs W., Clenries, Sanquhar
 1948 Fisher, James, James Wyllie & Sons
 (Grain Merchants), Ltd., Dumfries
 1949 Fleming, John, Becks, Langholm
 1948 Gibb, William, Kirkhill, Dalton,
 Lockerbie
 1949 Halliday, William J., Byreholm,
 Penpont
 1948 Hamilton, Joseph, Longrigg, Tor-
 thorwald, Dumfries
 1948 Harrison, John S., Bankhead, Loch-
 maben, Dumfries
 1949 Hastings, H., Rosehill, Holywood
 1948 Holmes, J. M., James Wyllie & Sons
 (Grain Merchants), Ltd., Dumfries
 1949 Hubbard, T. E., Castle Milk Estate
 Office, Lockerbie
 1949 Jamieson, Halbert, Castledykes, Dum-
 fries
 1948 Kirkwood, Robert, Dockenflat, Water-
 beck, Lockerbie
 1948 Lockhart, John L., Tanlawhill, Lock-
 erbie
 1949 M'Brice, Robert, jun., Mainhill Farm,
 Ecclefechan
 1949 M'Cutcheon, John Smith, Apple-
 garthtown, Lockerbie
 1948 Mackie, Andrew, Broomhouses, Lock-
 erbie
 1948 Mackie, John, Broadlea, Ecclefechan
 1948 Mackie, John, jun., Broomhouses,
 Lockerbie
 1948 Macknight, Ian (Macknight (Motors),
 Ltd.), Dumfries
 1949 Maxwell, J. G., Netherwood, Dumfries
 1948 Paterson, Mrs Margaret Scott, Ter-
 rona, Langholm
 1948 Paterson, R. T., c/o John Milligan
 (Dumfries), Ltd., 35 Whitesands,
 Dumfries
 1949 Robson, D. V. (John Milligan (Dum-
 fries), Ltd.), Whitesands, Dum-
 fries
 1949 Rome, J. M., Kirkbog, Closeburn
 1949 Russell, James, Langmyre, Thornhill
 1949 Shearer, Archibald, Kilbrook, Wam-
 phray, Moffat
 1948 Sloan, John, Yeskett, Ecclefechan
 1948 Smith, F. W., Boreland of Southwick,
 by Dumfries
 1948 Smith, W., Gotterbie Farm, Locker-
 bie
 1949 Spence, John, Rotherhill, Lockerbie
 1948 Templeton, William, Muirhousehead,
 Lockerbie
 1948 Tulloch, Alec, Gillesbie, Lockerbie
 1948 Tulloch, Mrs Alec, Gillesbie, Locker-
 bie
 1948 Tweedie, Guy Shortridge, Annerley,
 Annan
 1948 Wilson, James Armstrong, Tunder-
 garth Malns, Lockerbie
 1949 Wise, Alexander B., Downieston,
 Albert Road, Dumfries
 1948 Woodburn, John Strawhorn, Quhyte-
 woollen, Lockerbie
 1948 Woodburn, Robert, Millantae, Lock-
 erbie
 1948 Wyllie, James, Loreburn Park, Dum-
 fries
 1949 Young, T., Nether Gribton, Holy-
 wood

KIRKCUDBRIGHT

- 1949 Barbour, Mrs, Mochrum, Knock-
 vennie, Castle Douglas
 1948 Barbour, Robert, Melkie Mochrum,
 Knockvennie, Castle Douglas
 1948 Batchelor, Lieut.-Colonel Gordon G.
 M., Crochmore, Irongray, Dumfries
 (Kirkcudbright)

Admitted

- 1949 Black, James M'Gregor, N.D.A.,
 N.D.D., Kirklandhill, Kirkpatrick-
 Durham, Castle-Douglas
 1948 Craig, William M., Comptonend,
 Twynholm, Castle-Douglas
 1948 Crosbie, James, of Knockallan, Castle-
 Douglas
 1948 Dinwiddle, J. S., Galloway Hill,
 Terregles Road, Dumfries (Kirk-
 cudbright)
 1948 Dunlop, Mrs Betty Muir, Mid Kelton,
 Castle-Douglas
 1948 Findlay, W. K., Muncraig, Borgue
 1948 Finlay, Brian, Ross, Borgue
 1948 Finlay, James W., The Ross
 1949 Gordon, E. V., Assistant Farm
 Manager, Dunjop, Castle-Douglas
 1949 Gordon, Miss H. M., Dunjop, Castle-
 Douglas
 1948 Gordon, James Hilston, jun., Bore-
 land of Glrthon, Gatehouse-of-
 Fleet, by Castle-Douglas
 1948 Gray, Mrs Elsie Annie, Ingleston,
 Borgue
 1948 Houston, D. D., Blakiet Malns,
 Crockettford, near Dumfries (Kirk-
 cudbright)
 1948 Hutchison, Lieut.-Commander R. B.
 G., R.N., Castle Sod, Kirkcudbright
 1948 Kingan, James, jun., Lochhill, New
 Abbey, Dumfries (Kirkcudbright)
 1948 Kingan, Robert, jun., Blairhinnoch,
 Kirkgunzeon, Dumfries (Kirkcud-
 bright)
 1948 M'Conchie, John, Mossyard, Gate-
 house, Castle-Douglas
 1948 M'Culloch, Walter Jameson, M.C.,
 T.D., Ardwell, Gatehouse-of-Fleet
 1948 M'Dowall, Kenneth A., Girdsting-
 wood, Dundrennan, Castle-Douglas
 1949 M'Keachie, William, Garroch, Castle
 Douglas Road, Dumfries (Kirkcud-
 bright)
 1948 M'Millan, Gilbert, Margrie, Borgue
 1948 M'Millan, William E., Cairnholy,
 Creetown
 1949 M'Queen, D., Upper Barr, Corsock
 1948 M'Turk, Thomas, Gateside, Lochfoot,
 near Dumfries (Kirkcudbright)
 1948 Miller, J. R., B.Sc. (Agric.), The Cliffs,
 Portling, Dalbeattie
 1948 Montgomery, G. B., Rathamore,
 Auchencairn, Castle-Douglas
 1948 Montgomery, Mrs Jean F., Banks,
 Kirkcudbright
 1948 Pleken, David L., Milton, Kirkcud-
 bright
 1948 Pleken, James, Dromore, Kirkcud-
 bright
 1948 Robertson, Andrew, jun., Glen, Gate-
 house, Castle-Douglas
 1948 Robertson, James R., Glen, Gate-
 house, Castle-Douglas
 1948 Robertson, John C., Trostrie, Twyn-
 holm, Castle-Douglas
 1948 Witham, Mrs Freida H. A. Maxwell,
 Kirkconnell, New Abbey, Dumfries
 (Kirkcudbright)
 1949 Veitch, David Young, Low Creoch
 Gatehouse-of-Fleet

WIGTOWN

- 1948 Adams, R. S., Torhousekie, Wigtown
 1948 Brown, A. C. W., Prestrie, Whithorn
 1948 Brown, Norman, High Three Mark,
 Stoneykirk, Stranraer
 1948 Henderson, C. R. (James Wyllie &
 Sons (Grain Merchants), Ltd.),
 Garlieston

Admitted

- 1949 Hodge, Hugh R. B., Appleby, Whit-horn
 1948 M'Conchie, John M'G., Mains of Penninghame, Newton-Stewart
 1948 M'Master, James H., Barnmeal, Port-william
 1948 M'William, William A., Colfin, Stran-raer
 1948 Morrison, David, Culmalzie, Wigtown
 1948 Murray, Alexander Murray, Cars-craugh, Glenluce
 1949 Nicholson, Mrs. Kildsle, Whit-horn

Admitted

- 1948 Niven, John F., Mahaar, Kirkcolm, Stranraer
 1948 Stevenson, Archibald, Drumflower, Dunragit, Stranraer
 1948 Stevenson, John, Kirminnoch, Stran-raer
 1948 Stevenson, Robert, Auchentibbert, Sandhead
 1949 Stewart, Miss Faith M'Taggart, Clachanmore, Ardwell
 1948 Torrance, John Howie S., Killumpha, Port Logan, Stranraer
 1948 Vance, John, Bainsab, Whithorn

7.—INVERNESS DIVISION

CAITHNESS

- 1948 Alexander, Charles, Camster, by Watten, Caithness
 1948 Alexander, Donald, Pennyland, Thurso
 1948 Anderson, James M., Lhaid, Watten
 1948 Bain, Robert, Lhaid, Watten
 1948 Bain, William, Rampyards, Watten
 1948 Brims, Donald, Strath Farm, Watten
 1948 Brims, George, Flex, Watten
 1948 Brims, George Douglas, Flex, Watten
 1948 Budge, James, Rockhill, Wick
 1948 Campbell, Alexander T., Humster, Wick
 1948 Campbell, Andrew M., Acharole, Watten
 1948 Campbell, Archibald C., Acharole, Watten
 1948 Clarke, Henry, of Gavinstown Lodge, by Watten
 1948 Coghill, A., jun., Kirk, Bower, by Wick
 1948 Cormack, Peter, Nipster, by Watten
 1948 Doull, John J. C., Lybster, Caithness
 1948 Dunbar, David, Cogle, Watten
 1948 Dunnet, William C., Greenbank, 15 Duncan Street, Thurso
 1948 Gunn, David G., Factor, Watten Lodge, Watten
 1948 Gunn, Peter O., Sibster Mains, Wick
 1948 Harper, George, Back Bridge Street, Wick
 1948 Henderson, Mrs E., Reaster, Lyth, Wick
 1948 Henderson, George, Upper Thuster, Wick
 1948 Henderson, G. M. B., Reaster, Lyth, Wick
 1948 Henderson, William, Blacksmith, Gll-lock, Watten
 1948 Innes, Andrew, North Calder, Thurso
 1948 Kennedy, Alexander, Tresdale, Canis-bay
 1948 MacAde, D., Bowertower, Bower, Wick
 1948 Macadie, Donald Calder, Knockglass, Westfield, Thurso
 1948 Macaulay, John, Bruan Lodge, Clyth
 1948 MacDonald, A., 9 West Watten, Watten
 1948 MacDonald, S., Auchorn, Bower, by Wick
 1948 M'Ivor, John J., West Watten, Watten
 1948 Mackay, Ben S., Geiseltie, Thurso
 1948 Mackay, F., Bowermadden, by Wick
 1949 Mackay, R. G., St Clair, Lybster
 1948 Mackay, William C. S., Biggins, Killmister, Wick
 1948 MacKenzie, Henry, Westfield, Thurso

- 1948 MacKenzie, James, Achalone, Sheb-ster, Thurso
 1948 MacKenzie, John, Westfield, Thurso
 1948 MacKenzie, William, Achalone, Sheb-ster, Thurso
 1948 Macpherson, Donald W., Shorelands, Wick
 1948 Miller, David Bruce, Old Stirkoke, Wick
 1948 Miller, Finlay, 11 West Watten, Watten
 1948 Miller, James R., Implement Dealer, Scaraben, Wick
 1948 Miller, William, Wathegar, Wick
 1948 Murray, William S., Winless, Wick
 1948 Nicolson, Peter, Sibster, Wick
 1948 Paterson, James, 1 Robertson's Lane, Thurso
 1948 Polson, S., 8 West Watten, Watten
 1948 Ronaldson, D. M. N., Milton, Wick
 1948 Ronaldson, Peter N., Killmister, Wick
 1948 Rosle, Alexander, Hunster, Bower, Wick
 1948 Rugg, Alexander, Haster, Wick
 1948 Sibbald, Jack, Greystones, Watten
 1948 Sinclair, Angus, Acharole, Watten
 1948 Sinclair, B. M., Auctioneer, Wick
 1948 Sinclair, H. M., Olrig House, Castle-town
 1949 Sinclair, James T., 8 Macarthur Street, Pulteneytown, Wick
 1948 Sinclair, James Y., The Camps, Wick
 1948 Sinclair, John A., North Watten, Watten
 1949 Sinclair, Robin M., Thurso Castle, Thurso
 1948 Smith, William S. M., Markethill, Watten
 1948 Steven, David, Puldagon, Stirkoke, Wick
 1949 Steven, James, Bannskirk, Halkirk
 1948 Sutherland, James, Giffeld, Wick
 1948 Swanson, Donald, East Watten, Watten
 1948 Swanson, John, Bylbster, Watten
 1948 Swanson, J. B., Toftingall, Watten
 1948 Swanson, William, Pennyland, Watten
 1948 Waugh, John, Yarrow, Thrumster, Wick

INVERNESS

- 1948 Birnie, William, Braerannoch, Inver-ness
 1949 Blakie, Mrs Anne, Ardersier Mains, Ardersier
 1949 Blakie, Charles James, Ardersier Mains, Ardersier

Admitted

1949 BROCKET, Baron, Knoydart, Mallaig
 1948 Brown, William, Home Farm, Invergarry
 1948 Bryan, M. M., Secretary, North of Scotland Milk Marketing Board, Greig Street, Inverness
 1949 Campbell, D. A., Groan, Kirkhill, Inverness
 1948 Cattinach, Captain John H., Waverley Hotel, Kingussie
 1948 Chrystal, Mrs Lillian, Banchor, Newtonmore
 1948 Chrystal, William Y., Ardnacolle, Newtonmore
 1948 Chrystal, Mrs W. Y., Ardnacolle, Newtonmore
 1948 Coghill, Donald Evan, Wester Lovat, Kirkhill
 1948 Coghill, Robert A., Wester Lovat, Beauly
 1948 Craig, John Innes, Inverness Motor Co., Ltd., Strother's Lane, Inverness
 1948 Cross, William A., Ballintore, Kirkhill
 1948 Crulckshanks, Alex., Cattleman, Baillid, Newtonmore
 1948 Cumming, Donald, Borlum, Glenurquhart
 1948 Cumming, Ronald, Allanfeearn, Inverness
 1948 Dickie, George H., 38 Ardcannel Street, Inverness
 1948 Farquhar, William, Tomatin Distillery, Tomatin, Inverness
 1948 Fraser, Andrew, Teanlonaig, Beauly
 1948 Fraser, D. W., Milton of Culloden, Inverness
 1948 Fraser, R. H. E., Wester Feabule, Culloden Moor, Inverness
 1948 Fullerton, J. R., Boleskine House, Foyers
 1948 Gair, Charles I. M., B.Sc. (Agric.), Easter Monlack, Kirkhill
 1948 Goodbody, Mrs May, Invergarry House, Invergarry
 1948 Goodbody, William Urwick, of Invergarry, Invergarry House, Invergarry
 1949 Gordon, J. A. S., Sunnyholm, 12 Mayfield Road, Inverness
 1948 Gordon, John Grant, 78 Bruce Gardens, Inverness
 1949 GOUGH, Viscountess, Mansion House of Inshes, Inverness
 1948 Grant, Allister, Midtown, Scaniport
 1949 Grant, Duncan, Muckerach, Nethy Bridge
 1948 Grigor, Mrs J. M., Lentrán House, Lentrán
 1948 Henderson, Roland Bruce, 39 Island Bank Road, Inverness
 1948 Hill, David M'Cowan, Aigas, Beauly
 1949 Humphrey, Alastair R., 5 Academy Street, Inverness
 1948 Hutcheson, David, Moy Mains, Inverness
 1948 Johnston, George, Messrs Johnston & Strachan, Newtonmore
 1948 Johnston, Hugh Laurie, Culduthel, Inverness
 1948 Johnston, The Hon. Olive Lawson, Invermoldart, by Fort William
 1948 Kelly, Alexander, Hillhead, Croy
 1948 Kennedy, John, Cattleman, Banchor, Newtonmore
 1948 Kennedy, William, Lynwilg Farm, Aviemore
 1948 Kirkwood, M. M. B., Kincaig Farm, Kincaig
 1948 Langlands, Miss Mary D., North of Scotland College of Agriculture, 3 Union Street, Inverness
 1948 Lawrie, Mrs Charles, Gaskbeg Farm, Laggan, Kingussie

Admitted

1948 MacBain, William Cameron, Milton of Gollanfield, Inverness
 1948 MacBean, James, Achnabeachan, Farr, Inverness
 1948 M'Conachie, John (North-Eastern Agricultural Co-operative Society), 50 Thornbush Road, Inverness
 1948 Macdonald, Alexander, Wester Monlack, Kirkhill
 1949 M'Donald, G. S., Seafeld of Raigmore, Inverness
 1948 MacDonald, John A., Hamilton's Auction Mart, Inverness
 1948 Macdonald, Robert, Wester Monlack, Kirkhill
 1948 MacDonald, William Logle, Morayston, Inverness
 1948 M'Kinnon, D. A. (Howden & Company), Church Street, Inverness
 1948 Mackintosh, Miss Elizabeth B. B., Balnabual, Croy, Gollanfield
 1948 Mackintosh, James M., Hardhill, Croy, Gollanfield
 1948 MacLean, H. E., Heathmount, Beauly
 1948 MacLennan, Colin, Rhindule, Lentrán
 1948 MacLennan, D. Douglas, Balmachree, Inverness
 1948 MacLeod, Kenneth, J.P., Dunskeiler School House, Sollas, Lochmaddy, North Uist
 1948 M'Pherson, Andrew, Shepherd, Glenbanchor, Newtonmore
 1948 MacPherson, John, Craigphadric, Kingussie
 1948 M'Pherson, Raymond, Shepherd, Glenbanchor, Newtonmore
 1948 Macpherson, Walter, Farm Foreman, Banchor, Newtonmore
 1948 M'Queen, John, Dalmagarry, Moy, Inverness
 1948 MacRae, Allan, Upper Cullernie, Allanfeearn
 1949 MacRae, John Duncan H., of Drumore of Clava, Culloden Moor
 1948 Macrae, Kenneth A., Clunes Mains, Kirkhill
 1948 Macrae, Mrs Patricia C. A., Clunes Mains, Kirkhill
 1948 Melville, Major J. L., Ladies' Walk, Inverness
 1948 Milford, Mrs Phillip, Berryfield, Lentrán
 1948 Mitchell, John, Solicitor, 62 Academy Street, Inverness
 1948 Mitchell, W. A., Achtemarac, Drumadrochit
 1948 Munro, Charles, Upper Muckovie, Inverness
 1948 Munro, Charles A., Cantray Home Farm, Croy, Gollanfield
 1948 Munro, Colin, Banchor, Newtonmore
 1948 Munro, Ian A., Ashton, Inverness
 1948 Munro, James, Solicitor, 62 Academy Street, Inverness
 1948 Munro, W. J., Lower Muckovie, Inverness
 1948 Norrie, J. E., 2 Inglis Street, Inverness
 1948 Ormiston, Ewen, Newtonmore, Inverness-shire
 1948 Peterkin, Simon, Balnagaig, Inverness-shire
 1948 Rae, Major Harry J., Farm Manager, Lentrán Home Farm, Lentrán
 1948 Richardson, A. S., C.B.E., B.Sc., Agricultural Industry Development Company (Inverness), Ltd., 16 Telford Street, Inverness
 1948 Ross, Duncan, Mains of Croy, Croy
 1948 Ross, Colonel Gilbert, Academy Street, Inverness
 1948 Russell, John, Wester Connage, Dalross

Admitted

- 1949 Shaw, John Alexander, Slackbule, Inverness
 1919 Sidgwick, R. K., Assistant Factor, "Camus-na-ha," Corpach, by Fort William
 1948 Sime, James, Island Bank House, Inverness
 1948 Sime, Stewart, Crown Lodge, Inverness
 1948 Smith, George A., Manager, North of Scotland Bank, Ltd., Queensgate, Inverness
 1948 Smith, Michael, 84 Dochfour Drive, Inverness
 1948 Smith, Robert I., c/o Messrs Macdonald, Fraser & Co., Ltd., Inverness
 1948 STAKELBERG, Baron Nicolas, Erchless Castle, Beaulieu
 1948 STAKELBERG, Baroness Phyllis Mary, Erchless Castle, Beaulieu
 1948 Stephen, Dr John W., M.B., Ch.B., West Cullachle, Boat of Garten
 1949 Stewart, Mrs Ethel K. Vera Shaw, Traigh Farm, Arisaig
 1948 Stewart, William, Thornton Cottage, Culcabock, Inverness
 1948 Stirling, W. H., Holme Rose, Croy, Gollanfield
 1948 Thomson, John, Cullair, Scanport
 1948 Trotter, Richard Durant, Brin Mains, Flichity, by Inverness
 1948 Wotherspoon, Robert, Westwood, Inverness
 1948 Wylie, Herbert G., Inchrye, Ardersier

MORAY

- 1948 Adam, J. Duncan, Glassgreen, Elgin
 1948 Anderson, Gordon, Mayne, Elgin
 1948 Anderson, James B., Blackhillocks, Rafford, Forres
 1948 Anderson, P. M., Easter Kellas, Elgin
 1948 Brown, Mrs L., Dipple, Fochabers
 1948 Christie, William, Logie Terrace, Forres
 1948 Cruickshank, W. F. (Cameron & Templeton), Craigdhu, Granttown-on-Spey
 1949 DOUGLAS-HAMILTON, Lord Malcolm, O.B.E., D.F.C., Cullerne House, Findhorn
 1948 Falconer, A. L., 54 High Street, Elgin
 1949 Forsyth, Mrs Catherine, The Island House, Earnhill, Forres
 1948 Forsyth, James, Plimulr Villa, Forres
 1948 Forsyth, James C., 2 Cumming Street, Forres
 1949 Galloway, Captain I. C. P., Blervie House, Forres
 1948 Gillieron, Fred, Dykeside, Alves, Forres
 1948 Grant, James Leslie, Collic Farm, Orton
 1949 Henderson, James, Rafford Smithy, Forres
 1948 Houldsworth, Brigadier H. W., D.S.O., M.C., Dallas Lodge, Forres
 1948 Houldsworth, I. G., Dallas Lodge, Forres
 1948 James, D. F., Netherlton, Forres
 1948 Lochore, Mrs Hazel Mary, Burgie Mains House, Forres
 1948 MacDonald, William Fraser, Byres, Fochabers
 1948 MacKessack, Colonel Kenneth, of Ardyce, Elgin
 1948 Mustard, W. A., Cloves, Alves, Forres
 1948 Nicholson, Miss Doreen, Nuffield, Elgin
 1949 Philip, Mrs A. M., Strathspey Hotel, Granttown-on-Spey
 1948 Philip, Hamish Maclean, Mundole, Forres

Admitted

- 1948 Pirie, Alexander G. A., The Level, Birnie, Elgin
 1948 Rattray, E. W., Muirryhall, Urquhart
 1948 Relton, Edward A., Auchinroath, Rothes
 1949 Rhind, Alexander John, Hatton, Kinloss
 1948 Robertson, Bruce, Linkwood, Elgin
 1948 Russell, Major Alastair N., Reidhaven Street, Elgin
 1949 Sharpe, G. B., Plasmon Oat Mills, Forres
 1949 Sharp, William J., Manager, Castle Grant Home Farm, Granttown-on-Spey
 1949 Shepherd, Group Captain J., Wester Coltfeld, Alves, Forres
 1948 Smith, Donald J. G., Glenlatterach, Birnie, Elgin
 1949 Smith, Thomas A., Burnside of Dipple, Fochabers
 1948 STUART, Lady Hermione, Darnaway Castle, Forres
 1948 Symon, John, jun., Carsewell, Alves, Forres
 1949 Taylor, James, 18 Ashgrove, Elgin
 1949 Wildgoose, William Anderson, Spey Cottage, Garmouth, Morayshire

NAIRN

- 1949 Brown, William J., Blacksmith, Fountainsyde, Cawdor
 1948 CAWDOR, Earl, Cawdor Castle, Nairn
 1948 Innes, Alexander, Melkie Urchan, Nairn
 1948 Phillip, James B., Skene Park, Nairn
 1948 Rose-Miller, Brigadier G. P., Barevan, Cawdor
 1948 Rose-Miller, Mrs G. P., Barevan, Cawdor
 1943 Stephen, Ian D. Cameron, M.R.C.V.S., Janefield House, Nairn

ORKNEY

- 1949 Bisset, David R., County Organiser, College Office, Junction Road, Kirkwall, Orkney
 1949 Coutts, Alexander C., Camoran, Holm Road, Kirkwall, Orkney
 1948 Flett, John T., jun., Saverock, Kirkwall
 1949 Garrioch, James, Hotel, Sanday, Orkney
 1948 Hutchison, Magnus, Burgh Chamberlain, Burgh Chamberlain's Office, Kirkwall
 1948 Marwick, David, Rashieburn, Holm
 1949 Russell, James R. S., Langeskaill, Rousay

ROSS AND CROMARTY

- 1948 Anderson, D., Burnside, Killen, Avoch
 1948 Blackstock, W. Gordon, Manager, Calrossie, Mains House, Nigg Station
 1948 Brooke, R. W., Cromarty Mains, Cromarty
 1948 Brown, James A., M.R.C.V.S., Invergordon
 1948 Bruce, Miss A. M., Redcastle, Killearnan
 1948 Budge, D., Easter Barichie, Nigg
 1948 Budge, J., Easter Barichie, Nigg
 1948 Cairns, John H., Grunard Estate Office, Lalde, Achnasheen
 1948 Cameron, Collin M., Bainskyle, Munloch
 1948 Campbell, Lieut.-Colonel Hon. A. C., Flowerburn Mains, Fortrose

Admitted

- 1948 Campbell, The Hon. Mrs Helen, of Flowerburn, Fortrose
 1948 Cooper, Denis Edward James, Honey-suckle Cottage, Market Street, Ullapool
 1948 Davidson, John, Inverbreakie, Invergordon
 1948 DIK-LAUDER, Sir John, D.L., Arabella House, Nigg
 1948 Doull, W. S., Knockancouran, Evanton
 1948 Elliot, J. E. G., Braelangwell, Conon Bridge
 1948 Fraser, John, Drumore, Munlochry
 1949 Gibb, Jocelyn Easton, Keppoch Farm, Dundonnell, by Garve
 1948 Gibbs, Colonel W. O., A.D.C., Attadale, Strathcarron
 1948 Gibbs, Mrs W. O., Attadale, Strathcarron
 1948 Gordon, A. P., Newmore, Alness
 1948 Gordon, R. II. S., Pitcalzean, Nigg
 1948 Graham, D., Kinkell, Conon Bridge
 1948 Haig, Miss Rosemary, Kessock House, Kessock
 1948 Holm, Thomas, Alness Ferry, Balblair, Conon Bridge
 1948 Logan, Donald M., The Bay Farm, Avoch
 1948 Lattrell, Arthur B., Novar Estates Office, Evanton
 1949 M'Callum, Mrs M. C., Fodderty, near Dingwall
 1948 M'Callum, Peter George Loch, Lennalair, near Dingwall
 1948 Macdonald, Angus, Cononbrae, Conon Bridge
 1949 MacDonald, David R., Moorfarm, Tain
 1948 MacGillivray, Donald P., Calrossie, Nigg
 1948 M'Intyre, Cecil, Tulloch, Dingwall
 1948 M'Iver, A., Easter Auchterflow, Munlochry
 1948 M'Iver, J. D., Kilcoy, Killearnan
 1948 M'Iver, W., Inch, Avoch
 1948 Mackay, Donald Hugh, Polnicol, Delny
 1948 Mackenzie, Alexander, Viewfort, Fortrose
 1948 M'Kenzie, George, Bog of Auchterflow, Munlochry
 1949 MacKenzie, Major H. A. C., Dalmore, Alness
 1948 M'Kenzie, Hector Kenneth, 9 Balconie Street, Evanton
 1948 Mackenzie, Kenneth, Viewfort, Fortrose
 1948 M'Kenzie, William Broadfoot, 9 Balconie Street, Evanton
 1948 M'Lean, D., Allangrange Mains, Munlochry
 1948 M'Leod, Kenneth, Balnabeen, Conon Bridge
 1948 M'Phail, Kenneth, Pitglassie, Dingwall
 1949 MacRae, Miss Dorothy G., Conchra, Ardelve, Kyle
 1948 M'William, Mrs M., Drummondreach, Conon Bridge
 1948 Mends, Captain Robert, R.N., Rosehill, Tain
 1948 Middleton, Brigadier A. A., Rosefarm, Cromarty
 1948 Middleton, Jonathan A., Davidston, Cromarty
 1948 Mitford, Captain Philip Clive, Ullapool
 1948 Morrison, S. B., Easter Urray, Muir-of-Ord
 1949 Munro, Charles Robertson, Rockfield, Fearn
 1949 Munro, Finlay, jun., Rockfield, Fearn
 1949 Munro, of Foulis, Captain Patrick, Arduilie Lodge, Dingwall

Admitted

- 1948 Nicol, Thomas, Wester Culbo, Culbokie, Conon Bridge
 1948 Paris, Alastair, Crosshill, Avoch
 1948 Paris, R. J., Bennetsfield, Avoch
 1948 PERO, Sir Michael, Bt., Dundonnell House, by Garve
 1948 Raffan, J. M., Commercial Bank of Scotland, Ltd., Dingwall
 1948 Riggs, Donald C., Fettes, Killearnan
 1948 Riggs, Mrs E., Fettes, Killearnan
 1948 Riggs, Miss Margaret, Fettes, Killearnan
 1949 Rutherford, D. C., Culnaha Farm, Nigg
 1949 Rutherford, Hugh C., Culnaha Farm, Nigg
 1949 Rutherford, Mrs H. C., Culnaha Farm, Nigg
 1949 Rutherford, H. Gordon, Culnaha Farm, Nigg
 1949 Rutherford, T. II., Culnaha Farm, Nigg
 1948 Salvesen, Mrs Maude H., Teaninich, Alness
 1948 Salvesen, Major Noel G., of Teaninich, Alness
 1948 Sellar, Rev. John, Ferintosh Manse, Conon Bridge
 1948 Shaw-Mackenzie, Major Charles John, M.B.E., of Newhall, Balblair, by Conon
 1948 Stewart, A., Taeblair, Munlochry
 1948 Stone, Mrs Caroline Vere, The Plaids, Tain
 1948 Stone, Edward Reginald, The Plaids, Tain
 1948 Stuart, James D., M.R.C.V.S., Conon Bridge
 1948 Waugh, Adam, Humberston, Dingwall
 1948 Whyte, William, Drum, Avoch
 1948 Young, James E., Tarrel, Fearn

SHETLAND

- 1949 Ganson, Miss Evelyn H., Brentham House, Lerwick
 1949 Ganson, Mrs Mary G., Brentham House, Lerwick

SUTHERLAND

- 1949 Bruce, Captain Hon. John B., Sallachy, Lairg
 1948 Dudgeon, G. F., Crakaig, Loth
 1948 Grant, Captain R., Fynbar, Dornoch
 1948 Grant, Mrs, Fynbar, Dornoch
 1949 Grant, Mrs A. V., Pultrossie, Dornoch
 1948 Horne, Miss Phyllis M., Lairg House, Lairg
 1948 M'Intosh, William George, Pitgrudy, Dornoch
 1948 Mackay, John Calvin, Overskibo, Dornoch
 1949 MacKenzie, Mrs Dora, Balranald, Brora
 1948 Maclean, Donald, The Bridge Hotel, Helmsdale
 1948 MacLean, John, Bank of Scotland, Dornoch
 1948 Rawstorne, Brigadier G. S., C.B.E., M.C., Rovie Lodge, Rogart
 1948 Rawstorne, Mrs, Rovie Lodge, Rogart
 1948 Rutherford, Miss Eileen J., Proncy, Dornoch
 1948 Rutherford, Mrs, Proncy, Dornoch
 1948 SUTHERLAND, The Duchess of, Dunrobin Castle, Golspie
 1948 Tyser, Mrs, Gordonbush, Brora
 1948 Wignall, Colonel, Cambusmore, The Mound, Sutherland
 1948 Wignall, Mrs, Cambusmore, The Mound, Sutherland

8.—BORDER DIVISION

BERWICK

- Admitted
 1948 Aiton, James Scott, Legerwood, Earliston
 1948 Barbour, Mrs E. M., Mansefield, Duns
 1948 Brewis, Oswald, Little Swinton, Duns
 1948 Brewis, Thomas W., Little Swinton, Duns
 1948 Brown, J., Peelwalls, Ayton
 1948 Cavers, Walter Bruce, Pittlesheugh, Greenlaw
 1949 Clark, James Taylor, Bellshiel, Duns
 1948 Corsar, Charles H. K., Hoprig, Cockburnspath
 1948 Dickson, George Rae, Howlet's Ha', Gordon
 1948 Dickson, James Robert, Howlet's Ha', Gordon
 1949 Edwards, Alexander Lindsay, M.C., Edrington House, by Berwick-on-Tweed
 1949 Forrest, Mrs, Preston, Duns
 1948 Forrest, Robert L., Mersington, Greenlaw
 1949 Forrest, James, Boon, Lauder
 1948 French, T. E., Stuartslaw & Newstead, Duns
 1948 Hood, W., The Neuk, Cockburnspath
 1948 Letham, Adam, Fireburnmill, Coldstream
 1948 Letham, Robert M., Fireburnmill, Coldstream
 1948 Lyal, William Alexander, Greenknowe, Gordon
 1948 M'Donald, Kenneth, Alkingall, Cockburnspath
 1948 Mitchell, Alexander, Legars, Kelso (Berwickshire)
 1949 Moffat, Mrs G. S., Edington, Millhouse, Chirnside
 1948 Mole, William A., Greenburn, Reston
 1949 Moralee, F. W., Hilton, Duns
 1948 Niven, James P., Whitsemehill, Duns
 1948 Purdie, T. J., Hallydown, Coldingham
 1948 Rae, John, Linthill, Ayton
 1949 Runciman, George E., Wanton Walls, Lauder
 1949 Rutherford, Jeffrey, Agricultural Engineer, Earliston
 1948 Sloan, R. A., Crossrig, Hutton, Berwick-on-Tweed
 1949 Sutherland, Ian J., Hillhouse, Oxtou, Lauder
 1948 Waddell, Rankin, Rumbleton, Greenlaw
 1948 Walker, Mrs Mary Dun, Cammerlaws, Gordon
 1948 Walker, Victor John, Cammerlaws, Gordon
 1949 Wedgwood, Reginald, Mainhill, Duns
 1948 Wood, Harold, The Bank House, Berwick-on-Tweed

PEEBLES

- 1948 Anderson, D. J., Cademuir, Peebles
 1948 Brockie, R. W. E., Chapelhill, Peebles
 1949 Bruce, Norman Reid, Mansemanet, Broughton
 1948 Campbell, A., West Mill, Dolphinton
 1948 Coke, William H., Nether Pirn, Innerleithen
 1948 Outhbertson, A., Jedderfield, Peebles
 1948 Dick, Thomas, Hamildean, Peebles

Admitted

- 1949 Forbes, J. W., The Kirna, Walkerburn
 1949 Forbes, Mrs, The Kirna, Walkerburn
 1948 Gardiner, W., 48 Old Town, Peebles
 1949 Hepburn, John, Easter Haprew, Peebles
 1948 Hepburn, T., Easter Haprew, Peebles
 1948 Laird, W., Netherurd Mains, West Linton
 1948 Little, W. R., Kirklands, Innerleithen
 1949 M'Laren, D., Polmood, by Biggar
 1949 Manning, Neil, Tweedshaws, Tweedsmuir, by Biggar
 1948 Masterton, Mrs Mary Graham, Burnetland, Broughton, Biggar
 1948 Masterton, Thomas Tudhope, Burnetland, Broughton, Biggar
 1948 Napier, W. E. S., Kerfield, Peebles
 1948 Orr, J., Broomlea Mains, West Linton
 1948 Reid, John, Robertson Mains, Dolphinton, West Linton
 1948 Reid, W., Felton, West Linton
 1948 Smellie, J., Cardrona Mains, Peebles
 1949 Thorburn, W. Hunter, Glenormiston, Innerleithen
 1948 Walker, A., Alterstane, Stobo, Peebles
 1948 Warden, I. H. G., South Slipperfield, West Linton

ROXBURGH

- 1948 Allan, William, Cappuck, Jedburgh
 1948 Bell, Harry, Midshiele, Hawick
 1948 Brewis, Thomas H., Lempitlaw, Eastfield, Kelso
 1948 Buglass, Ralph, Minto Kames, Hawick
 1949 Clark, Miss Anne, The Rigg, St Boswells
 1949 Clark, Dr E., The Rigg, St Boswells
 1949 Clark, Mrs M., The Rigg, St Boswells
 1948 Coltherd, Alex. Scott, Inglenek, Gattonside, Melrose
 1948 Common, Alexander L., Butcherccote, St Boswells
 1949 Douglas, W. J., Upper Hindhope, Jedburgh
 1949 Ewing, Mrs, Mounthooly, Jedburgh
 1948 Gibson, William, Woodhouse, Jedburgh
 1948 Hamilton, Miss Margaret, Earlside, Hawick
 1949 Hogg, Mrs Elizabeth A., Clackmae, Earliston (Roxburgh)
 1949 Hogg, Miss E. Sheila, Pavillon Farm, Melrose
 1949 Horn, Allen D'Arcy, Allerby, Gattonside, Melrose
 1949 Irvine, William, "Lealands," Honeyfield Road, Jedburgh
 1948 Laing, George Norman Lindsey, Twisleshope, Newcastleton
 1949 Law, Captain Thomas Stewart, Riddell, Melrose
 1949 Luke, David J., 22 The Tofts, Kelso
 1949 Matheson, Commander Patrick, Ormiston, Hawick
 1948 Murray, Mrs, Reddan, Kelso
 1948 Robertson, Robert J., Morebattell Tofts, Morebattell
 1949 Scott, Miss Ann E., Frogden, Kelso
 1949 Scott, Charles, Millsington, Hawick

Admitted

- 1949 Scott, Mrs Jane E., Frogden, Kelso
 1949 Scott, Miss Kathleen W., Milsington, Hawick
 1949 Scott, Miss Margaret J., Frogden, Kelso
 1949 Sprot, Major John, Riddell Mains, Melrose
 1949 Stewart, Colonel Francis R. Cameron, Mid Blainslie, Galashiels
 1948 Wilson, Andrew, Broadloan, Kelso
 1948 Young, Cyril, Kirk Yetholm, Kelso

SELKIRK

Admitted

- 1948 Bayne, John, Rink Farm, Gala-shiels
 1948 Brunton, James, Houdshall, Selkirk
 1948 Ormiston, Adam W., "Marlefield," Ashybank Park, Selkirk
 1948 Ormiston, Andrew Watson, "Marlefield," Ashybank Park, Selkirk
 1949 Mill, W. H., S.S.C., J.P., Hollybush, Galashiels

ENGLAND AND WALES

- 1949 Armstrong, Thomas Henry, Thrunton, Whittingham, Northumberland
 1949 BALFOUR, The Lady Eve, New Bells Farm, Haughley, Suffolk
 1949 Barr, John, M.R.C.V.S., Crown Square, Penrith, Cumberland
 1948 Batkin, H. W. (Salopian Engineers, Ltd.), Prees, Whitechurch, Shropshire
 1948 Beck, Dudley, Darland Hall, Rossett, Denbighshire, North Wales
 1948 Benger, John, c/o Messrs Allen & Simmonds (Holdings), Ltd., Reading
 1949 Bibby, John Killop, Conder, Croft Drive East, Cald, Cheshire
 1949 Bourne, John, Snowhill Hill, Moreton-in-Marsh, Gloucestershire
 1948 Brewis, Michael J., Chesterhill, Belford, Northumberland
 1948 Brewis, Robert, Chesterhill, Belford, Northumberland
 1948 Brown, David (David Brown Tractors, Ltd.), Meltham, near Huddersfield
 1948 Brown, William Pearson, Alderley, Market Street, Easingwold, York
 1948 Burdette, J. M. (International Harvester Company of Great Britain, Ltd.), Harvester House, 259 City Road, London, E.C.1
 1949 Calvert, R. F. (C. C. Wakefield & Co., Ltd.), 46 Grosvenor Street, London, W.1
 1948 Carmichael, James W. L., Scremerston Hill, Scremerston, Northumberland
 1948 Chase, J. L. H., The Grange, Chertsey, Surrey
 1949 Churchward, Frank (Co-operative Wholesale Society Ltd.), 1 Balloon Street, Manchester
 1949 Clarke, Mrs Ida, Ashdell, Sheffield, 10
 1948 Cooch, John H. (Cooch & Son), Commercial Street, Northampton
 1948 Cramp, E. M., Upway House, Madeley, Shropshire
 1949 Crofts, R. B. I. (R. J. Fullwood & Bland, Ltd.), Ellesmere, Shropshire
 1948 Dalrymple, John Liston, The White House, Balcombe, Sussex
 1948 Darling, Thomas, Greys, Royston, Herts.
 1948 Dunn, H., The Green, Easingwold, Yorks.
 1949 Elliott, J. W., 23 Westfield Grove, Sunderland
 1948 Elmslie, J. K. S., M.R.C.V.S., Cadnant, Wigton Road, Carlisle, Cumberland
 1948 Elstone, J. D. (Dunlop Rubber Co., Ltd.), Fort Dunlop, Erdington, Birmingham

- 1948 Evans, David J. (The United Manufacturing Co. (Bury), Ltd.), Lydgate House, Crown Street, Bury St Edmunds, Suffolk
 1949 Evans, J. A. (Petters, Ltd.), Causeway Works, Staines, Middlesex
 1948 Farrer, W. R., Garden Cottage, Green Hammerton, York
 1948 Gibson, Sidney, Town End Farm, East Boldon, Co. Durham
 1948 Gibson, Mrs, Town End Farm, East Boldon, Co. Durham
 1949 Gladstone, Richard J., Holmside Hall, Burnhope, Co. Durham
 1949 Glover, D. M. (United Lubricants, Ltd.), Farleigh House, Lawrence Lane, London, E.C.2
 1949 Gowans, Fred F. (Gowans, Mitchinson & Lambert, Ltd.), 39 Bondgate Hill, Alnwick, Northumberland
 1949 Graves, W. R. (E. J. Jobling-Purser & Co. Ltd.), St Nicholas Chambers, Newcastle-on-Tyne
 1949 Hague, H. (Tamkin Bros. & Co. Ltd.), Beehive Lane Works, Chelmsford, Essex
 1949 Harper, Lionel, c/o Messrs Massey-Harris, Ltd., Stretford, Manchester
 1948 King, Charles Frederick Lawrence (The British Wagon Co., Ltd.), 23 Moorgate, Rotherham
 1949 Kirby, E. L. C., 64 Birches Road, Codsall, near Wolverhampton
 1949 Laird, Colin, Brook House, Park Lane, London, W.1
 1949 Lawson, James, 24 Gloucester Road, Carlisle
 1948 Leslie, Hon. J. W., Queenshill, Sunningdale, Berks.
 1949 Leslie, James Campbell (The British Oil and Cake Mills, Ltd.), Unilever House, London
 1949 Lindsay, George Calder Douglas, Elmhurst, Snitterfield, near Stratford-on-Avon, Warwickshire
 1949 Lister, Cecil, c/o R. A. Lister & Co., Ltd., Dursley, Glos.
 1948 McClure, W., Heron Hall, Herongate, Brentwood, Essex
 1948 Manktelow, D. S. (Garner Mobile Equipment, Ltd.), 94 Ravenscroft Avenue, Preston Road, Wembley, Middlesex
 1948 Marsh, F. B. (David Brown Tractors, Ltd.), Meltham, near Huddersfield
 1948 Marston, George, Rippledale, Riding Mill, Northumberland
 1948 Merryweather, G. T. (Goodyear Tyre & Rubber Co., Ltd.), 63 Albert Road, Wolverhampton

Admitted

- 1949 Moore, A. Guy (British Basic Slag Ltd.), Greenwoods, Roundwood Lane, Hayward's Heath, Sussex
- 1949 Norman, Willoughby R. (Boots Pure Drug Co. Ltd.), Station Street, Nottingham
- 1949 Osmond, Lealle Roy (Osmond & Sons Ltd.), The Garden House, Humbers-ton Avenue, New Waltham, near Grimsby
- 1948 Pangbourne, G. W. (Alfa-Laval Company, Ltd.), Great West Road, Brentford, Middlesex
- 1948 Park, W., Mardon, Cornhill-on-Tweed, Northumberland
- 1948 Parker, John Keith, Church Farm, Bramerton, Norwich, Norfolk
- 1948 Parker, Keith, Church Farm, Bramerton, Norwich, Norfolk
- 1949 Pattinson, John, J.P., Lingmell, Seascale, Cumberland
- 1949 Pattinson, John Duncan, 5 Reeth Road, Hartburn, near Stockton-on-Tees, Co. Durham
- 1949 Pattinson, Richard Lowthian, Bleamire House, Greysouthen, near Cockermouth, Cumberland
- 1948 Pelly, Kenneth R., Grouselands, Colgate, Horsham, Sussex
- 1949 Phillips, J. W. (Joseph Lucas, Ltd.), Great King Street, Birmingham, 19
- 1949 Phillips, S. W. (The Rover Co. Ltd.), Lode Lane, Solihull, Birmingham
- 1949 PRINCE-SMITH, Lady, Southburn House, near Driffield, East Yorks.
- 1949 Prince-Smith, W. R., Southburn House, near Driffield, East Yorks.

Admitted

- 1948 Reece, A. M., c/o Messrs Charles H. Pugh, Ltd., Whitworth Works, Birmingham 9
- 1949 Riley, W. H., Burbank House, Blencowe, Penrith, Cumberland
- 1948 Rogers, W. L. (British Motor Boat Manufacturers Co., Ltd.), Britannia House, Ampton Street, London, W.O.2
- 1948 Ross, J., Inland Pasture, Scremerston, Northumberland
- 1948 Rowland, Ernest William Arthur (J. W. & T. Connolly, Ltd.), Stanhope Street, Euston Road, London, N.W.1
- 1949 Smith, Mrs Cornella Mary Eustace, Thrunton, Whittingham, Northumberland
- 1948 Stewart, Gavin Burton (Stewarts & Lloyds, Ltd.), Brook House, Upper Brook Street, London, W.1
- 1948 Taylor, F. W. (Boots Pure Drug Co., Ltd.), Station Street, Nottingham
- 1949 Thomas, G. H., c/o Massey-Harris, Ltd., Stretford, Manchester
- 1948 Turner, Robert, Shuttleworth College, Old Warden Park, Biggleswade, Bedfordshire
- 1949 Walton, Joseph, Roseden, Wooper-ton, Northumberland
- 1949 Warren, Mrs H. P., New Park, Maplehurst, near Horsham, Sussex
- 1949 Webster, Ernest Alfred, Unthank Hall, Haltwhistle, Northumberland
- 1949 Williams, Stephen, M.Sc., N.D.A. (Boots Pure Drug Co., Ltd.), Magadales, Thurgarton, Notts.

IRELAND

- 1949 Counihan, Niall J., "Clover Hill," Clondalkin, Co. Dublin
- 1949 Gilmer, Arthur, 16 Broughton Gardens, Belfast

- 1948 M'Clinton, Captain John F., M.C. 48 Victoria Street, Belfast

INDEX.

- Abstract of Accounts, 284.
Accounts, Annual, 284; Submitted to General Meeting, 319.
- Agricultural Education: Reports on Examination held in 1948, 313, 321; Regulations and Syllabus, Appendix I., 17.
- Agricultural Examinations for 1949, Date of, Appendix I., 16, 19.
- Agricultural Research in Scotland in 1948. Institute of Animal Genetics, University of Edinburgh, 77; Animal Diseases Research Association, 81; Rowett Research Institute, 82; Scottish Plant-Breeding Station, 85; Hannah Dairy Research Institute, 88; Macaulay Institute for Soil Research, 91; The Edinburgh and East of Scotland College of Agriculture, 96; North of Scotland College of Agriculture, 101; West of Scotland Agricultural College, 107; Royal (Dick) Veterinary College, 111.
- Agricultural Statistics, 156.
- Alexander, J. W., M.V.O.: Reports on Hill Sheep Subsidy and Wool Marketing, 293, 303.
- Animal Diseases Research Association: Grant of £200; (1948) Confirmed, 292; Approved, 312; (1949) Recommended, 310.
- Argentine Ban on Imports: Letter to Prime Minister, 307.
- Argyll Naval Fund: Accounts, 288; Submitted, 319.
- Barley, Prices of, for 1948, 163.
- Board Meetings, Proceedings at, 291-310.
- Botanical Department, Appendix I., 63.
- Brownlie, W. M., B.Sc., M.R.C.V.S., D.V.S.M.: Observations on the Performance of Sheep Breeds other than the Scottish Blackface on an Argyllshire Hill Farm, 32.
- Burnett, Robert P., C.A.: Taxation—Farms and Estates, 1.
- Bye-laws, Revision of, 293; Confirmed by General Meetings, 312, 316.
- Cameron, A. E., M.A., D.Sc., F.R.S.E.: Resignation as Consulting Entomologist, 310.
- Cereal and other Crops of Scotland for 1948, 126.
- Chairman of Board: Mr James R. Lumsden of Arden re-elected, 296.
- Chemical Department, Appendix I., 56.
- Colouring of Wool: J. W. Alexander, M.V.O., and Captain James Craig reported on Meeting with D.O.A.S., 292.
- Committees for 1948-49, Appendix I., 9.
- Compensation Values: Table showing the value per ton of Feeding-stuffs as Manure, &c., Appendix I., 59.
- Composition and Feeding Value of Grass and Clover, by Professor S. J. Watson, D.Sc., F.R.I.C., F.R.S.E., 16.
- Contagious Abortion: Report of Meeting called by N.F.U. by Society's representatives, Major R. F. Brebner, C.B.E., and William Hogg, 297.
- Cottages and Gardens: Premiums offered in 1949, Appendix I., 84.
- Crops of Scotland. Cereal and other, for 1948, 126.
- Dairy Department: Regulations and Syllabus of Examinations, Appendix I., 29, 40, 48.
- Dairy Examinations for 1949: Dairying, 29; Dairy Husbandry, 40; Dairy Technology, 48; Date of, Appendix I., 19, 32, 42, 50.
- Deaths of—
Colquhoun, Sir Iain, Bt., of Luss, 298.
Elliot, William I., Middleton, Stow, 305.
Grant, George, of Glenfarclas, 307.
Hendrick, Professor James, Aberdeen, 308.
McLaren, J. T., Stirling, 302.
Marshall, H. B., of Rachan, 295.
Plummer, Major C. H. Scott, Sunderland Hall, Selkirk, 295.
Powrie, Lord Provost Archibald, Dundee, 304.
- Directors for 1948-49, Appendix I., 6.
- Directors: Representatives on other Bodies, Appendix I., 13.
- District Competitions: Awards in 1948, 281; Premiums offered in 1949, Appendix I., 65.
- District Grants, Appendix I., 65.
- Dundee Show, 1949: Visit of Special Committee to Site; Area extended by 7 acres; Discussion with Town Council re Water, Gas, and Electricity services, 293; Judges Selection Committee; Forage Committee; Forestry Exhibition, Grant of Free Stand and £40 towards expenses; Special Prizes accepted, 296; Erection of Showyard, change in arrangements, 298; Report of Sites Committee, 299; Regulations and Prize List, 299; Increased Prize Money, 299; Shows Committee, 299; Stewards: Horse-Shoeing Competitions, Hackneys, Hill Cattle, Forestry, Catering, and Special Prizes, 302-303; Appointment of Messrs Alexander Hall & Son, Ltd., Aberdeen, as Showyard Erectors, 304; Veterinary Inspector, Assistant Stewards, Forage, Free Stands, 305; Catering: The Royal Athenæum Ltd., William Murray & Sons (Bakers) Ltd., and Dundee Pasteurised Milk Co. Ltd., appointed, also British Women's Temperance Association for Stock and Stand Attendants, 306; Horse-Shoeing and Shoe-Making Competitions; Further Special Prizes; Rabbit Judges, 306; Directors' Badges, cost of alteration to new title, "Royal," 307; New Turnstiles, 307; Judges of New Implements; Further Special Prizes, 308; Car Parking, 308; Show Posters, 309; Programme of Events; Further Special Prizes, 309; Proposal by Ayrshire Cattle Herd Book Society that a Panel of Inspectors be set up to exercise control over Ayrshire Cattle entered for the Show, 309; Car Park, Wormit, 309; Report on arrangements by John Niven, 313; T. A. Wedderspoon reported, 320.

- Durno, James, Congratulations to, on honour of C.B.E., 318.
- Edinburgh Corn Market, Grain Tables for 1948, 163.
- Education Committee: Appointment of R. M. Lemmon to National Agriculture and Dairy Examinations Boards, 310.
- Entomological Department, App I., 62.
- Essays and Reports, Appendix I., 65.
- Establishment for 1948-49, App. I., 6.
- Examinations, Dates of, Appendix I., 16, 19, 32, 50.
- Feeding-stuffs, Prices of, 1949, Appendix I., 56; Table showing the value per ton of, as Manure, Appendix I., 59.
- Fertilisers, Prices of, season 1949, Appendix I., 56.
- Finance: Proceedings in regard to, 292, 298, 301, 304, 308, 310; Report to General Meeting, 319.
- Forestry: Certificates in (discontinued), Appendix I., 55.
- Funds, State of the, 282.
- General Meetings, Proceedings at, 311-322.
- Glasgow Agricultural Exhibition, "The Country comes to Town": Report submitted by Liquidator *re* Surplus Proceeds and distribution thereof, 293.
- Glasgow and West of Scotland S.P.C.A.: Grant of £10; Confirmed, 292; Approved, 312.
- Glasgow Veterinary College: Grant of £150; (1948) Confirmed, 292; Approved, 312; (1949) Recommended, 310; Medals awarded 1948, 280.
- Grain, Prices of, for 1948, in Edinburgh Corn Market, 163.
- Grainger, John: The Tithe of Plant Disease, 56.
- Grants to Local Societies, 301, 319, 322.
- Hall, Alexander, & Sons (Builders) Ltd., Aberdeen: Appointed Showyard Erectors, 304.
- Her Majesty The Queen: Visit to Dundee Show announced, 310; Committee appointed to make arrangements, 310.
- Highland Reel and Strathspey Society, Edinburgh: Grant of £75; Confirmed, 292; Recommended, 310; Approved, 312.
- Hill Sheep Subsidy: J. W. Alexander, M.V.O.; Report on meeting, 303.
- Hoing Competitions, Regulations for, Appendix I., 89.
- Improvement of Livestock, 293; Report on Meeting with D.O.A.S. by Major R. F. Brobner, C.B.E., and James Wither, 297; Further Report by James Wither, 306.
- Inverness Show, 1948: Report on, 171; Premiums awarded at, 163; Diseased Sheep Exhibition by D.O.A.S., 291; Report by Major Brebner, C.B.E., 312; Veterinary Inspector for the Cawdor Cup, Alexander J. MacLennan, B.Sc., M.R.C.V.S., Eastgate, Inverness, appointed by the Clydesdale Horse Society, 293; Report by Captain Ian S. Robertson, Convener of Show Committee, 320.
- Lemmon, R. M., B.L.: Appointed Secretary, 299, 320.
- Livestock Export Group: Appointment of William Hogg as Society's representative, 305.
- Livestock and Meat, Marketing of: Meeting called by Scottish Council (Development and Industry), 297; Representatives appointed, 297; Report on Meeting attended by William D. Simpson and J. C. Wallace Mann, 300, 302.
- Local Societies, Grants to, 198, 281, 319, 322.
- Long Farm Service: Certificates and Medals: Regulations, Appendix I., 89; Awards in 1948, Appendix I., 90.
- Lumsden, James R., of Arden, re-elected Chairman of Board of Directors for 1948-49, 296.
- Manure, Table showing the value per ton of Feeding-stuffs as, Appendix I., 56.
- Manures, Instructions for Valuing, Appendix I., 57.
- Marketing of Livestock and Meat; see Livestock.
- Medals, Ploughing, Regulations for, Appendix I., 87.
- Meetings, Proceedings at Board and General, 291-310.
- Meetings, Regulations regarding, Appendix I., 15.
- Members, Privileges of, Appendix I., 4.
- Membership: The Chairman of Directors reported on numbers on the list of members, 318.
- Milk Records, by James A. Paterson, 112.
- National Diploma in Agriculture: Reports on Examinations, 313, 321; Regulations and Syllabus, Appendix I., 17; Successful Candidates in 1948, Appendix I., 26.
- National Diploma in Dairy Husbandry (N.D.D.H.): Regulations for examination in 1949, Appendix I., 40; Syllabus of subjects of Examination, Appendix I., 43.
- National Diploma in Dairying: Additional desks and seats at Dairy School, Auchincruive, Society agreed to meet one-half of cost, 308; Reports on Examinations, 321; Regulations and Syllabus, Appendix I., 29; Successful Candidates in 1948, Appendix I., 37.
- National Diploma in Dairy Technology (N.D.D.T.): Regulations and Syllabus for Examinations in 1949, Appendix I., 47.
- New Members, 311, 318.
- Oats, Prices of, for 1948, 163.
- Observations on the Performance of Sheep Breeds other than the Scottish Blackface on an Argyllshire Hill Farm, by W. M. Brownlie, B.Sc., M.R.C.V.S., D.V.S.M., 32.
- Office-bearers, 1948-49, Election of, 311.
- Paisley Show, 1950: Dates of Show fixed, 20th to 23rd June 1950; Paisley Town Council agreed to conditions laid down by Society regarding use of St James' Park, 310.

- Paterson, James A. : Milk Records, 112.
- Petrol for Agricultural Tractors : Letter from Messrs Harry Ferguson Ltd., 309.
- Ploughing Competitions, Regulations for, Appendix I., 87.
- Potatoes, Inspection of Growing Crops of : Reports of Conference submitted by W. D. Simpson, 303.
- Premiums awarded in 1948, 280 ; Offered in 1949, Appendix I., 65.
- Prices of Grain for 1948, 157.
- Prices of Sheep, 164.
- Prices of Wool, 168.
- Privileges of Members, Appendix I., 4.
- Proceedings at Board Meetings, 291-310.
- Proceedings at General Meetings, 311-322.
- Rainfall Records for 1948, 155.
- Receipts and Payments for 1947-48, 290.
- Records, Milk, by James A. Paterson, 112.
- Representatives appointed on other Bodies, Appendix I., 13.
- Research in Scotland, Agricultural, in 1948, 77-111.
- Ritchie, John E. M.A., B.Sc., Aberdeen, to revise the Tables of Un-exhausted Manures and Feeding-stuffs, for reissue, 305.
- Ross-Taylor, Sir Joshua : Report on Agricultural and Dairy Examinations, 1948, 313, 321.
- "Royal" : Grant of privilege of using the title "Royal" by H.M. The King, 295.
- Royal Highland and Agricultural Society : Proceedings, 291 ; Constitution, Appendix I., 3 ; Privileges of Members, Appendix I., 4 ; Establishment, Appendix I., 6 ; Meetings, Appendix I., 15.
- Royal Scottish Agricultural Benevolent Institution : Grant of £250 ; Confirmed, 306.
- Royal Visit to Show : Visit of H.M. The Queen, 310 ; Special Committee appointed to make arrangements, 310.
- Russell, T. W., Resignation of, 304.
- Scotland, Agricultural Research in, in 1948, 77-111.
- Scotland, Cereal and other Crops of, for 1948, 126.
- Scottish Agricultural Organisation Society : Grant of £100 confirmed, 303 ; Approved, 319.
- Scottish Society for the Prevention of Cruelty to Animals : Grant of £10 approved, 319.
- Secretary : Resignation of John Stirton, O.B.E., 297 ; Retiring Allowance, 304, 309.
- Secretary, Appointment of, 298 ; Richard M. Lemmon, B.L., appointed, 299, 320.
- Sheep, Prices of, 164.
- Show of 1950 : Invitation from Glasgow Corporation to hold Show in Glasgow at Bellahouston Park, 296 ; Town Council of Ayr inquired about acreage required, 296 ; Sites Committee appointed, 296 ; Recommended that St James' Park, Paisley, be the venue, 308.
- Show of 1951 : Agreed to hold in Aberdeen Division, 303 ; Appointment of Sites Committee, 306.
- Show of 1953 (Stirling Division) : Proposal that 1953 Show be held in King's Park, Stirling, 298 ; Letter from Town Clerk of Alloa suggesting Show for 1953 be held there, 301 ; Letter from Burgh Surveyor, 302 ; Letter from Town Clerk regretting that cost of levelling King's Park site would prevent its being available, 310 ; Letter from Town Clerk, Alloa, inviting Society to consider Alloa Park policies as a venue, 310.
- Simpson, W. D., Highfield, North Berwick : Report on Conference on Inspection of Growing Crops of Potatoes, 303.
- State of the Funds, 282.
- Statistics, Agricultural, 156.
- Subscriptions, Members' : Decision to raise lower rate from 10s. to 20s.. and higher rate from £1, 3s. 6d. to £1, 10s., recommended ; Alterations in Life Subscription and in Bye-laws, 291, 293 ; Members to have option to compound for Life Subscription at old rates up to 30th November 1949, 301.
- Taxation—Farms and Estates, by Robert P. Burnett, C.A., 1.
- Tithe of Plant Disease, The, by John Grainger, 56.
- Title of the Society : Grant of privilege to use the title "Royal," by H.M. The King, 295.
- Unit Values of Manures and Feeding-stuffs : Schedule to continue to be issued, 305.
- Veterinary College, (Glasgow) : Medals awarded 1948, 280.
- Veterinary College, Royal (Dick) : Medals awarded 1948, 280.
- Veterinary Department : Medals, Appendix I., 55.
- View of Receipts and Payments, 1947-48, 290.
- Watson, Professor S. J., D.Sc., F.R.I.C., F.R.S.E. : The Composition and Feeding Value of Grass and Clover, 16.
- Watson, R. A., B.A. : The Weather of Scotland in 1948, 148.
- Weather of Scotland in 1948, by R. A. Watson, B.A., 148.
- Wheat, Prices of, for 1948, 163.
- Wool, Colouring of : J. W. Alexander, M.V.O., and Captain James Craig reported on Meeting with D.O.A.S., 292.
- Wool Marketing : J. W. Alexander, M.V.O., and Captain James Craig reported on negotiations with other bodies, 293.
- Wool, Prices of, 168.

THE BRITISH LINEN BANK

Founded in 1746 the Bank has a long tradition of service to the Farming Community and, keeping abreast of conditions, it is glad to offer every Modern Banking Facility at its Offices throughout the country.

Enquiries are invited.



*Head Office :—*EDINBURGH

SERVICE

YOU CAN

DEPEND ON

A visit to our Agricultural Showrooms and Workshops will convince you that the service we offer in New Implements, Machinery, Spare Parts, and Repairs is without equal. Large Stocks held in Dundee ensuring earliest possible despatch.

Fordson Major Tractors, Standard Fordsons Fully Reconditioned, F-R Mounted Ploughs, Ransome's No. 3 R.D.S. Ploughs, Ransome C60 Toolbars, Ford Ridgers, Newland's Cultivators, Ford Cultivators, M.M. 10" Hammer Mills, Scotmec Hammer Mills, Bentall Crushers, Lister Engines and Lighting Sets, Alco Lighting Sets, Sawbenches, Mobile and Portable, Stationary Engines, Water Pumps, Butter Churns, Milking Machines, Market Garden Tractors, Dairy Equipment, Agricultural Sundries.

*"Our prompt service
saves
your money"*

says
Fordson
Farmer



*Send for our Illustrative and Descriptive
Price List.*

GEORGE McLEAN LTD.
GRAIG STREET, DUNDEE

Tel 5087 (5 lines)

MAIN FORD DISTRIBUTORS

Modern Power Farming demands Reliable
Maintenance and Repair.

~ ~ ~

Farm Steading Wiring and Power Installations.

~ ~ ~

Diesel Specialists.

~ ~ ~

D. McINTOSH & SONS

Agricultural, Motor, and Electrical Engineers

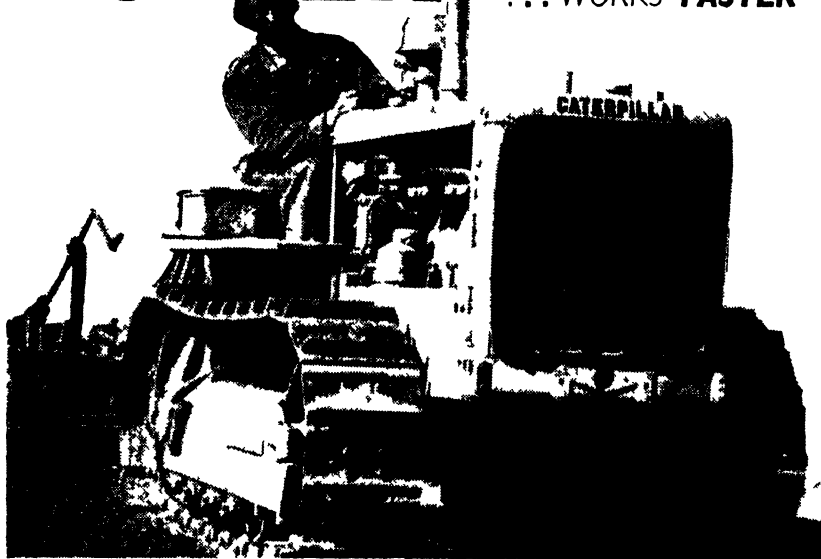
ERROL - - PERTHSHIRE

'Phone: ERROL 219

'Grams: McINTOSH, ERROL

Caterpillar' D2 Tractor has 24% more **POWER**

WORKS **HARDER**
... WORKS **FASTER**



Caterpillar' D2 tractors save ploughing time by steady unflinching performance. Their wide tracks give a firm grip in mud or on steep gradients.

This dependable 'Caterpillar' D2 Diesel has a power-plus of 24 per cent over former models, gets more work done. Engine improvements give 32 HP at the drawbar, 38 HP at the belt!

This extra power saves you time and money. You can handle larger implements, cover more ground. Or you can

haul present implements faster, in a higher gear. The result is the same. *More work is done.*

And behind every 'Caterpillar' Diesel Tractor, new or old, stand the service and spares facilities of the L O Tractors' organization devoted to the maintenance of 'Caterpillar' equipment throughout Scotland.

Write for details of these famous tractors, and of other first-class implements for the modern farmer.

L.O. Tractors Ltd

COUPAR ANGUS · PERTHSHIRE · Phone COUPAR ANGUS 173



CROPMASTER

THE WORLD'S FINEST TRACTOR and IMPLEMENTS

5 GREAT ADVANTAGES :

- (1) CONSTANT DEPTH CONTROL.
- (2) CORRECT VAPORIZATION OF P.V.O., GIVING LOW FUEL COSTS.
- (3) THE RIGHT WEIGHT, APPROX. 31 CWT., ON PNEUMATICS.
- (4) 2 - SPEED P.T.O. AND BELT PULLEY PROVIDES CORRECT POWER AND SPEED FOR ALL STATIONARY AND POWER-DRIVEN IMPLEMENTS.
- (5) LOW-PRESSURE LIFT, USING THE OIL IN THE GEAR BOX.

And many others.

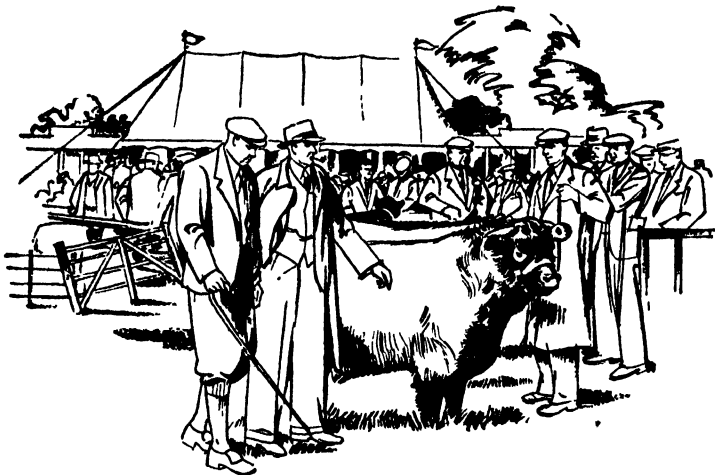
Modernise your Farming Methods by using a
DAVID BROWN CROPMASTER AND IMPLEMENTS.

There is a Tool to suit any job on the Farm.

**G. A. ROSS & CO., FRIOCKHEIM,
ANGUS.**

MAIN DAVID BROWN DISTRIBUTORS.

Telephone : 285-6 Friockheim.



A Long Association

Scottish Farmers have a justifiable pride in the excellence of their livestock and high quality of their grain. For them the Agricultural Show holds a keen attraction; old acquaintances are renewed and new inventions in agricultural implements are discussed.

The Clydesdale & North of Scotland Bank enjoys a close relationship with the Scottish farming community, and gives every consideration to the financial requirements of the progressive farmer.

CLYDESDALE & NORTH OF SCOTLAND BANK LIMITED

**PROVIDES THE FARMER WITH
A COMPLETE BANKING SERVICE**

JOHN J. CAMPBELL }
G. L. WEBSTER } Joint General Managers

HEAD OFFICE—

30 ST VINCENT PLACE, GLASGOW, C.1

360 Branches throughout Scotland



Glasgow's Oldest Established Rubber Firm



for

Double Texture Waterproofs
Riding Coats • Oilskin Leggings
Rubber Aprons • Rubber Hose
Rubber Wellingtons • Rubber-
proofed Overalls for Veterinary
Surgeons

Order by Post
with confidence
from our
**MAIL ORDER
DEPT.**

421 Sauchiehall St.
(Charing Cross)
Glasgow, C. 2

Waterproofs sent
on appro. against
full deposit



DUNLOP

Best on Earth



Robertson Rubber Co. Ltd for Rainwear

421 SAUCHIEHALL ST. (Charing Cross)
34 and 44 Queen Street, Glasgow
7 West Blackhall Street, Greenock
12 Alloway Street, Ayr



What is the **COOPER TECHNICAL BUREAU?**

Where is it and what does it do?

Farmers must often wonder what this somewhat official and high-sounding name really implies—it is so often referred to in our literature that an explanation should be helpful.

The Cooper Technical Bureau is a modern building, situated in the High Street of Berkhamsted and staffed by keen, hard-working men and women, each highly trained and specially skilled in a specific branch of science. The building has been specially designed to provide suitable laboratory and administrative accommodation for modern methods of research work on the control of livestock pests.

In addition to half a dozen qualified Veterinary Surgeons, the team includes experienced Bacteriologists and Chemists working closely in unison with the Company's research teams and factory laboratory staffs, both in the home country and in pastoral countries overseas.

Research and experiment go on unceasingly. Small-scale trials with new products are constantly being carried out on the nearby Cooper Research Farm. Then there follow extensive field trials, for which the Company is indebted to the many farmers who have so willingly assisted. These large-scale trials are the final test of new products—under normal farm conditions—all over the country.

So it is to *this* organisation with the highbrow name that the reputation of Cooper products is entrusted.

The recent spectacular advances in the control of Sheep Tick, Maggot-fly, Keds, and Lice are almost entirely due to the unceasing efforts of this hard-working team of scientists. It will readily be admitted that such work has proved of inestimable value to all owners of livestock both at home and overseas.

But the work of the Cooper Technical Bureau does not cease once new products have been formulated and sent to the factories for manufacture. From that date onwards the "Bureau" insures to the Company, and to the user, that every drum, every tin, and every bottle sent out by a Cooper factory will uphold the honour and integrity of the manufacturer.

Laboratory staffs at factories, working under the guidance of the "Bureau," test each individual batch of every product before it is put into a container. Moreover, a sample is retained, from each batch manufactured, for future reference. No product reaches the user without having passed its particular test in the factory laboratory. This system of testing ensures that sound products only, specially designed for a particular purpose, are put in the hands of stockmen with confidence that they will perform as claimed by the Company.

Now you know what the name "Cooper Technical Bureau" stands for and how it functions in the interests of livestock owners throughout the pastoral world.

COOPER, McDOUGALL & ROBERTSON (Scotland) Ltd.
62 ROBERTSON STREET, GLASGOW, C.2

I. A. R. I. 75.

INDIAN AGRICULTURAL RESEARCH
INSTITUTE LIBRARY
NEW DELHI.

[illegible]

S. C. P.—1/8/47 P. J.-3-5-48-2000